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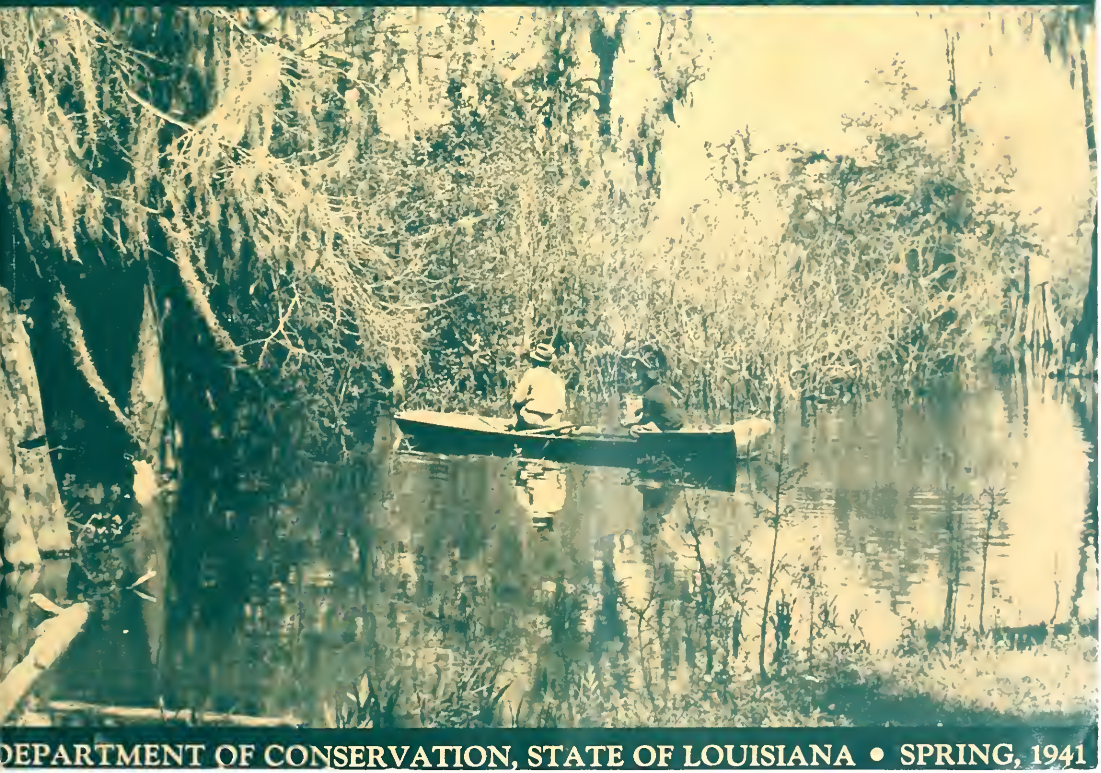
LOUISIANA CONSERVATION REVIEW



DEPARTMENT OF CONSERVATION, STATE OF LOUISIANA • SPRING, 1941

Conservation Film Loan Service

The Department of Conservation has instituted an educational film service of wild life, forestry, and other natural resource subjects on standard 16MM size film. Most of these films are in sound.

Any Louisiana organization or school may borrow these films, paying only the cost of transportation both ways. The following films are ready for general circulation:

THE FUR BEARING ANIMALS OF LOUISIANA—This film shows the various valuable fur bearing animals of Louisiana in their natural habitat. (Sound)

PINE WAYS TO PROFIT—Shows how Southern farmers have realized extra profit in the past few years through the careful management and protection of their woodlands. Shows the importance of protection and management of forests for the general welfare of the community. (Sound)

GOING FISHING—Angling for various species of Louisiana game fish are shown in this film. Fly fishing for Black Bass, bait fishing, trolling at the mouth of the Mississippi River for tarpon. (Sound)

CONSERVATION OF NATURAL RESOURCES—An educational film showing the waste of natural resources and some of the things being done to prevent this waste. (Sound)

HOW NATURE PROTECTS ANIMALS—Mother Nature does her best to protect her children. This film shows how and why. (Sound)

LOUISIANA QUAIL HUNT—Filmed by Fred McCormac showing the thrill of hunting quail in North Louisiana with dog and gun. (Silent)

GAME BIRDS OF THE MARSH—Snipe and duck hunting in the Louisiana marsh lands. Duck shooting scenes taken on the state owned public hunting grounds at Pass A Loutre. (Silent)

WHERE TO NOW—An animated cartoon showing how man has abused the natural resources of the United States. A very educational film. (Silent)

TREE OF LIFE—This subject points out the pattern of community life in which the economic value of forests play such an important part. Shows the dependence of many persons on the forest for employment, recreation and the general enjoyment of life. (Sound)

ABC OF FORESTRY—Deals with the rudiments of forestry. Points out seed source, the growth of trees, timber harvesting and forest protection. Especially desirable for schools. (Sound)

OPERATION OF A FOREST NURSERY—Deals with the growth of planting stock for forest purposes and the planting and protection of trees. Completely explains nursery operations. (Sound)

SALT AND SULPHUR OF LOUISIANA—Showing the methods used in mining these valuable natural resources. (Sound)

FOR PARTICULARS ON HOW THESE FILMS MAY BE OBTAINED WRITE THE—

DEPARTMENT OF CONSERVATION

DIVISION OF EDUCATION AND PUBLICITY

126 Civil Courts Building **New Orleans, La.**

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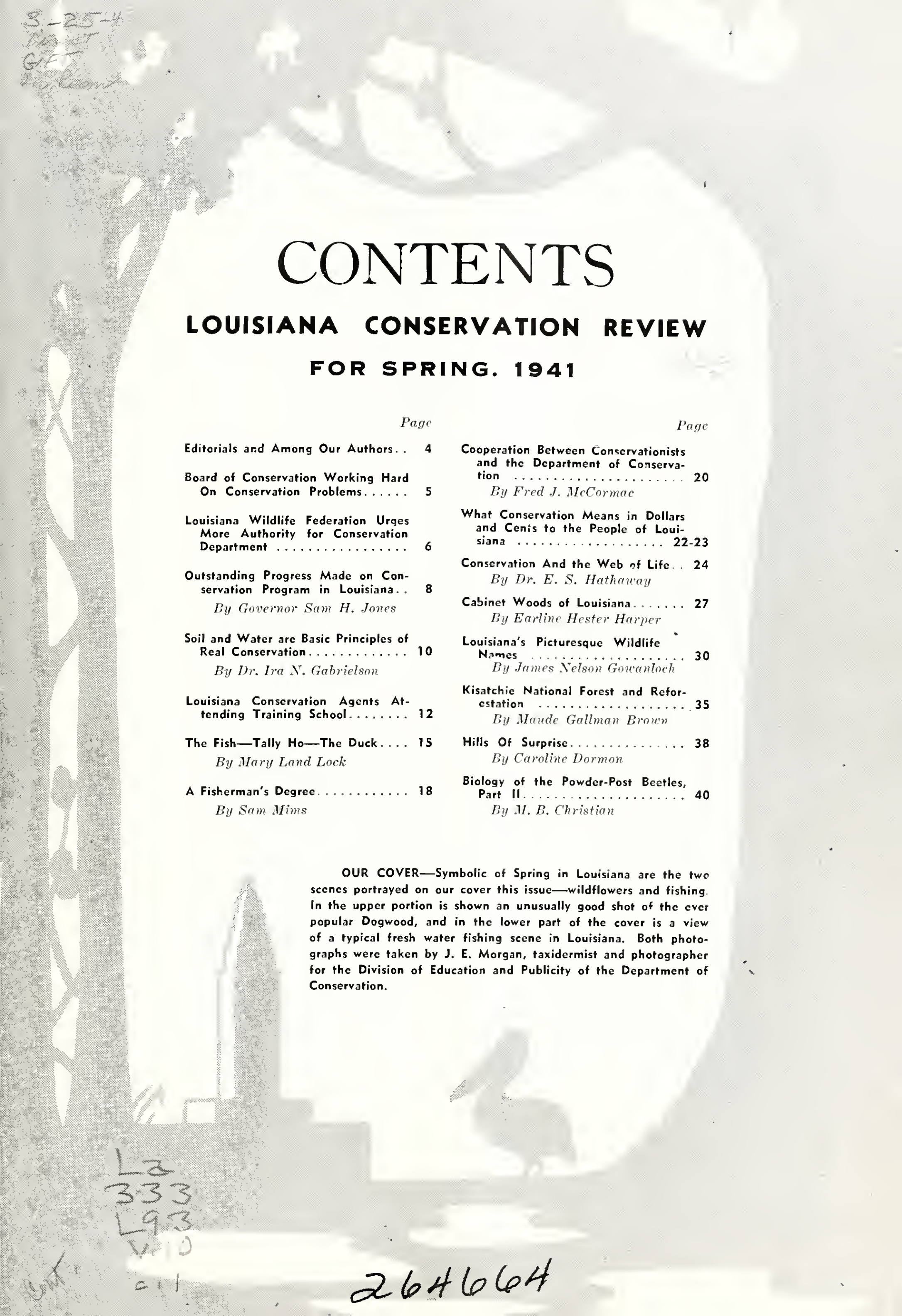

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OUR COVER—Symbolic of Spring in Louisiana are the two scenes portrayed on our cover this issue—wildflowers and fishing. In the upper portion is shown an unusually good shot of the ever popular Dogwood, and in the lower part of the cover is a view of a typical fresh water fishing scene in Louisiana. Both photographs were taken by J. E. Morgan, taxidermist and photographer for the Division of Education and Publicity of the Department of Conservation.

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Louisiana
CONSERVATION REVIEW

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Vol. X **SPRING, 1941** **No. 1**

AMONG OUR AUTHORS

Dr. Edward S. Hathaway, the author of "Conservation and the Web of Life" in this issue, is head of the Zoology Department of Tulane University.

Mrs. Roland Brown, who writes under the pen name of Maude Gallman Brown, is the author of "Kisatchie National Forest and Reforestation". Her home is in Monroe. She has contributed articles to True Detective, B.T.U. Magazine, Philadelphia Inquirer and numerous other newspapers and magazines. In her spare time between gardening and housekeeping, she is writing a novel.

Other contributors include Mary Land Lock, formerly connected with the Publicity Division of the Department of Conservation; Fred J. McCormac, Chairman of the Board of the Department of Conservation; Sam Mims, Planning Technician of the Department of Public Works; Caroline Dormon, highway beautification specialist of the Department of Highways; Earline Hester Harper of Shreveport; Dr. J. N. Gowanloch, Chief Biologist of the Department of Conservation and others.

EDITORIALS

Remarkable Progress

The growth of the Louisiana Wildlife Federation during the seven months it has been in existence may truly be considered phenominal in every respect. Organized in New Orleans on October 27, 1940, with a membership of a few hundred and with representatives from sixteen organizations located in fifteen parishes, the Federation has grown by leaps and bounds, and at its most recent convention held in Baton Rouge, a few weeks ago on May 10 and 11, a membership of over 5,000 was reported with representatives present from fifty-five organizations located in forty-eight parishes in the state.

Such remarkable progress can mean but one thing, and that is that the people of Louisiana have become thoroughly aroused to the necessity of a well organized and efficient conservation program. It means that our people are becoming more conservation-minded, which is indeed a good sign.

It also shows the results of the sound education program on conservation that has recently been undertaken in the state and further tends to bring out the unlimited possibilities for greater good that education and proper publicity can help make possible.

The success of any conservation program depends on cooperation from the people who are truly interested in conservation. The Louisiana Wildlife Federation has made a wonderful start and is to be commended on the progress already reported.

Conservation Agent's School

It has always been considered the proper thing in Louisiana to train police officers in law enforcement work. Conservation agents, charged with the responsibility of enforcing the numerous conservation laws in the state have in the past never been required to undergo any special training nor required to have any particular special knowledge of law enforcement procedure, even though their duties compare in importance to those of any other law enforcing agency in the state.

But all of that has been changed, and for the first time in Louisiana, as far as is known, Conservation Agents are now going to school and are undergoing a thorough and strict course of study in all phases of enforcement work.

That these Agents will be better versed in conservation law enforcement, will be better equipped and qualified to perform greater and more efficient service, is a self-evident conclusion, with the State of Louisiana reaping the benefits through more constructive enforcement of its conservation laws.

Board of Conservation Working Hard on Conservation Problems

Shortly after their appointment last February, the nine members of the Board of the Department of Conservation held a meeting in New Orleans, elected officers, and proceeded to work on a long range constructive conservation program for the State of Louisiana.

Since that time, two other meetings of the Board have been held and the various committees have been functioning all the time.

Fred J. McCormac, New Orleans, was elected chairman of the Board at its first meeting. P. A. Bloomer, Fisher, lumberman, was elected vice-chairman, and Marvin C. Potter, secretary to W. H. Hodges, Jr., Director of the Department of Conservation, was elected clerk of the Board.

Chairman McCormac announced the appointment of the following committees:

Oysters and Shrimp: Gordon Y. Miliet, Houma, chairman; Andre A. Olivier, St. Martinville, and John M. Parker, Jr., New Orleans.

MARVIN C. POTTER

Secretary to the Director, and Clerk of the Board of Conservation.

Parks: Andre A. Olivier, chairman; Glen L. Shadow, Ruston, and William H. Nalty, Hammond.

Forestry: P. A. Bloomer, Fisher, chairman; Charles V. Holbrook, DeRidder, and William H. Nalty.

Wildlife and Fisheries: Glen L. Shadow, Ruston, chairman; N. Hobson Wheless, Shereveport, and William H. Nalty.

At its first meeting in New Orleans the members of the Board met with the heads of the various divisions of the Department of Conservation and heard the heads of these divisions make reports on work that is being undertaken or contemplated.

The most recent meeting of the Board of the Department of Conservation was held in Baton Rouge on May 9th, an all day session, which was held prior to the annual convention of the Louisiana Wildlife Federation.

■ In the photo above are shown the board members. From left to right, seated, W. H. Hodges, Jr., Director of the Department of Conservation; William H. Nalty, Hammond; P. A. Bloomer, Fisher; Fred J. McCormac, New Orleans; Gordon Y. Millet, Houma. Second row, left to right, Andre A. Olivier, St. Martinville; Charles V. Holbrook, DeRidder; Glen L. Shadow, Ruston; N. Hobson Wheless, Shreveport; John M. Parker, Jr., New Orleans.

LOUISIANA WILDLIFE FEDERATION URGES MORE AUTHORITY FOR CONSERVATION DEPARTMENT

With delegates in attendance from some 55 organizations in 48 parishes, the annual convention of the Louisiana Wildlife Federation, held in Baton Rouge, May 10 and 11, was considered an outstanding success from every point of view. More than 200 registered for the convention, which was held at the Heidelberg Hotel, with the Baton Rouge unit, acting as hosts for the occasion.

The convention adopted a resolution urging the Legislature to give the Department of Conservation the authority to open and close all seasons on wildlife, to establish bag or creel limits, to define the means and methods of taking game, to establish hours of taking wildlife, and to have authority to make rules and regulations with respect to all things pertaining to the conservation and propagation of wildlife in Louisiana.

H. C. CABAUD, Jr.
President of the Louisiana Wildlife Federation, who presided during the business sessions at the convention.

Monroe was selected as the next convention city, and the by-laws were amended to make the meeting dates the first Saturday in March instead of in May.

Nine directors-at-large were elected by the convention. Between now and July 1st, according to a change made in the by-laws, additional directors will be elected to represent clubs in the various congressional districts. This is to be based on one director for each 150 paid-up members, with a maximum of three directors representing a paid-up membership of 500. These directors, together with the nine at large elected by the convention, are required to meet between July 1st and July 15th, to name the officers for the ensuing year, and in the meantime, the present officers serve until that time.

The outstanding accomplishments of the Louisiana Wildlife Federation convention held in Baton Rouge May 10 and 11, as embodied in a master resolution adopted by the convention, represents what might be considered the basis of a real conservation program in Louisiana. Features of the resolution:

That the Legislature be requested to vest in the Department of Conservation authority to:

1. **Open and close all seasons on wildlife**
2. **Establish bag or creel limits**
3. **Define the means and methods of taking game**
4. **Establish hours of taking wildlife**
5. **Have authority to make rules and regulations with respect to all things pertaining to the conservation and propagation of wildlife in Louisiana.**

That the Legislature be requested to establish uniform license fees covering the taking of all fresh water game fish by means of artificial baits, lure, live bait (worms excepted).

That recommendations be made to the U. S. Fish and Wildlife Service that the Dove season and the season for taking Migratory Waterfowl in Louisiana be fixed at a time which in the opinion of the Fish and Wildlife Service will be best suited to Louisiana.

That hours be fixed for the taking of Migratory Waterfowl from day break to 12 o'clock noon, and that the bore of fire arms used in taking Migratory Water Fowl and Shore Birds be unchanged.

That the Department of Conservation be urged to continue the publication of the Conservation Review.

H. C. Cabaud, Jr., President of the Federation, presided at the business sessions. The treasurer's report given by Paul W. McIlhenny, showed that the Federation had a cash balance of $1,482.64, as compared with $207.57 at the beginning of the last convention held in October, 1940.

W. H. HODGES, Jr.
Director of the Department of Conservation, who acted as toastmaster at the annual banquet held at the convention.

PRESIDENT'S ADDRESS

President Cabaud outlined the progress of the Federation and struck the keynote of the convention in his address at the opening session. "This Federation was organized at a meeting in New Orleans on October 27, 1940", President Cabaud stated. "That meeting was attended by representatives from 16 organizations located in 15 parishes. Today we meet for our 1941 convention with representatives from 55 organizations located in 48 parishes. This simple statement of fact should suffice to explain what has been taking place during the past six months."

Other excerpts of President Cabaud's address is as follows:

"With regard to the future, I believe that this Federation is the real hope for a permanent conservation program and now that we have a representative group united in one organization, work lies ahead of us not behind us.

"We are fortunate that we have at present a state administration that is conservation minded, but conservation is not the sort of problem which can be solved in the short space of time allotted to a state administration by the constitution of the state. The most that can be accomplished under the present state administration is the laying of a fundamentally sound ground-work for conservation, and that will be a real accomplishment. The real accomplishments of a sound program cannot and will not be realized for years to come.

"By attending this meeting, you have displayed a sincere interest in the problem of bringing conservation to Louisiana. It is up to you. If you treat this meeting as the end of our work and when you leave here return to your homes and forget the Louisiana Wildlife Federation, until such time as you are called to another meeting, our Federation will soon disintegrate and disappear and all our work will amount to nothing. However if you consider this the beginning and leave here prepared to spread the gospel of the need for conservation to every corner of the state and do all in your power to keep the spark of interest alive within your own units, the success of the Federation is assured and the State of Louisiana is assured of conservation permanently."

GOVERNOR TALKS

Fred S. LeBlanc, Mayor of Baton Rouge, formally welcomed the delegates to the Capital City and he was followed on the program by Governor Sam Jones. (The Governor's address appears in detail on page 8 of this issue)

At a noon luncheon Saturday, Vincent H. Mosley, Vice-President of the Opelousas Wildlife Association, presided as toastmaster. Speakers included H. L. McKnight, lecturer of the Publicity and Education Division of the Department of Conservation and Houston Gascon, Game Management Agent of the U. S. Fish and Wildlife Service.

Saturday afternoon's session was featured by an open forum conducted by Dr. Ira N. Gabrielson, Director of the U. S. Fish and Wildlife Service, and delegates were given an opportunity to ask questions from the floor, which were answered by Dr. Gabrielson and members of the staff of the Department of Conservation.

DIRECTOR HODGES PRESIDES

Committee meetings were held Saturday afternoon, and on Saturday evening, the annual banquet took place, presided over by W. H. Hodges, Jr., Director of the Department of Conservation. Speakers included Major James Brown, Chief of Fisheries and Wildlife, Wm. H. Chisholm, Chief of Research, and M. E. Brashears, Chief of Forestry, of the Department of Conservation. They substituted for the two scheduled speakers, who were unable to attend. These were W. F. Dearman, Director Game and Fish Commission of Mississippi and William J. Tucker, Executive Secretary of the Game, Fish and Oyster Commission of Texas.

At the night session, following the banquet, the feature addresses were made by Fred J. McCormac, Chairman of the Board of the Department of Conservation and Dr. Ira N. Gabrielson of Washington. (Articles reproduced from the speeches of Mr. McCormac and Dr. Gabrielson appear elsewhere in this issue.)

BY-LAWS ARE CHANGED

At the Sunday morning session, Henry H. Chaffe, chairman of the By-Laws Committee, read the proposed changes in the by-laws of the Federation, which were adopted. The principal changes referred to the holding of annual con-

[Turn to Page 14]

■ Nine directors-at-large elected at the Baton Rouge convention of the Louisiana Wildlife Federation are shown in this picture. Left to right, seated, they are: S. C. Knight of Elizabeth. C. K. Montgomery of Vermilion, Charles L. Wurster, Sr. of Catahoula, and Judge Gus Voltz, Alexandria. Left to right, standing: H. A. Achee, White Castle. Henry C. Sevier, Tallulah, Fred M. McCaleb, New Orleans, Charles L. Horne, Shreveport, Bryant A. Bateman, Baton Rouge.

(Photo by Francis Julais)

Outstanding Progress Made On Conservation Program In Louisiana

by
Sam H. Jones
Governor of Louisiana

Most of you, no doubt, are interested in being members of wildlife organizations not because you desire to make any money out of it, but because of the pleasure and sport that you get out of it. But I think that we people in Louisiana over-look the economical importance of our natural resources and particularly the fish and game in this state. I, myself, was absolutely astounded to learn of the find. We speak of our agricultural crops, our cotton, our rice, our sugar cane, and yet very few of us realize that our crops of muskrats and supply of shrimp and oysters, and commercial fish, combined amount to almost as much as the value of sugar cane or the value of rice grown in this state. Last year the value of the fur crop, and these are conservative figures, amounted to $6,840,510, the value of the shrimp catch, 5 3/4 million dollars; of the commercial fish, both fresh and salt water, 1 1/4 million dollars and oysters $1,150,000, giving a grand total of $15,140,086. Over the five year period, the value of the sugar cane crop in this state amounted to 15 1/2 million dollars, the value of the rice crop, $15,800,000 dollars, so that we have a resource, a crop if you will, of tremendous importance, economically and financially to this state, one upon which many people live and gain their daily livelihood.

Our great oil industry yields to the State of Louisiana a total of $100,000,000 a year, but out of that $100,000,000, as you all know, most of the product goes out of the state, owned by oil companies that come into the state, so that when you figure it from the standpoint of royalty then we derive approximately 12 1/2 million dollars to the land and royalty owners so that again the value of the wildlife, your fish and game, in this state amounts to fully as much and possibly more than the combined royalties from all our oil land in the state. I think it can be conservatively said that we can increase the yield of our fur trapping industry, our fish and oysters, and our shrimp, and I do not think it is going too far to say that from that $15,000,000 we can increase it to possibly $25,000,000 by proper methods of conservation and regulation and control of our industries.

CREDIT GIVEN TO SPORTSMEN

Now I know that in the language of the average politician, it would be my cue to say what I have done to help out the situation. I haven't done anything. I have merely taken the recommendations of the sportsmen of Louisiana and assisted in putting those recommendations into effect. And whatever credit there is due, you are entitled to it. Now I would like to call your attention to a few of the things that you have done.

Editor's Note—On October 27, 1940, Governor Sam Jones addressed the organization meeting of the Louisiana Wildlife Federation in New Orleans, attended by representatives from 16 organizations in 15 parishes, and urged a partnership between the State of Louisiana and all interested in conservation.

Approximately seven months later, on May 10, 1941, Governor Jones again addressed the convention of the Louisiana Wildlife Federation held in Baton Rouge, attended by delegates from 55 organizations in 48 parishes, and told of the success of the partnership, recounting the progress that has been made in conservation, and giving credit to the conservationists of Louisiana.

This article is reproduced from the address of Governor Jones delivered at the Baton Rouge convention of the Louisiana Wildlife Federation held on May 10 and 11.

In the first place, you wanted a conservation department that would not be tied on to the oil industry. You wanted something that would be independent of the oil industry, you wanted the minerals division taken out so that you could have a department that would be dedicated to the work of the conservation of our other natural resources. In the reorganization of the state government that is exactly what you got so that today we do not have an oil man regulating fish and game, oysters and shrimp, and fur in the state. We have a man who is familiar with the problems of the fish, of birds, and we have placed the mineral department in charge of a man who knows the mineral game. Now another thing you wanted and that you asked for, and got, is a conservation board that knew something about the problems of wildlife. You got exactly what you asked for and a majority, a considerable majority of the members of the conservation board, were named by the Louisiana Wildlife Federation and if they do not make a good job of it, it is not the fault of Sam Jones, but the fault of the Louisiana Wildlife Federation because that board is your board and I think it is doing a real job. Now what is the board and its directors, and what are we trying to do, and what are we doing? In the first place, they have inaugurated a system whereby they expect to replenish the wildlife supply in the state of Louisiana as well as the fish supply. At your request, because you wanted it, we passed a law which permitted the state of Louisiana for the first time to share in federal funds for the replenishing of wildlife supply, the Robinson-Pittman Fund, by which we get several thousand dollars dedicated solely to the purpose of replenishing the wildlife supply in this state.

Our trapping and fur business in this state yields to trappers six million dollars a year. We do not think we have scratched the surface.

At the suggestion of the federal government we have established down at Morgan City a station for the study of the shrimp industry. Shrimp have been destroyed in many places where there used to be a tremendous supply.

Another thing that has been done because you wanted it done is the regulation of the trapping business in the state.

SUCCESSFUL TRAPPING SEASON

We were discussing the famous Marsh Island. We have the finest trapping lands in the state of Louisiana, or I should say in the western hemisphere. In spite of the fact that we took approximately 300,000 pelts last year, Dr. Gabrielson tells me that he flew over the island and it is literally filled with muskrats again, to show that trapping probably does not destroy, but under proper methods gives us an increased supply. The trappers on Marsh Island made more money last year than ever before because the middle man was cut out. As a result of it, approximately a hundred trappers made an average of $2,000.

I interviewed most of them personally and found that they will take their money, $2,000, and build homes. For the first time they have an opportunity to get the profit of their own labor. The middle man was cut out, and so, my friends, that policy will be continued and those people will be economically adjusted and will be able to establish themselves in the future. That is because people like you wanted that. It is better that we have these people financially independent than to keep them in slavery. What has been done on Marsh Island can be done on any other lands, public or private. We are going to utilize some of the $100,000 on Marsh Island replenishing fur bearing animals as well as other wild life in the state.

AGENTS BEING TRAINED

You wanted something else, people to work at the job of conservation or game agents. It is a good thing to train police officers, so why not train game wardens? You wanted them trained, and a group of them are now in school in St. Tammany Parish. They are being trained by men who know, by federal agents, experts on wildlife, to do their job. After they are trained, they will know something about their job, and can intelligently go out and enforce the laws. And let me tell you a few things that have been done. In 1939 there were 300 prosecutions for the violation of fish and game laws. During last vear there were 2,000 prosecutions because you wanted those laws enforced. After we train our conservation agents, what are we going to do over and beyond that? You wanted an efficient personnel. At your request we have provided in our laws a civil service division whereby civil service regulates these employees as well as other state employees, and these things have been done because you have asked that they be done. I say that because, I, myself, do not fish I don't hunt because I don't know how, but I receive my information and take my directions from people who know something about it.

JOB FAR FROM FINISHED

Now I don't want to minimize the appeal that fishing and hunting have for true hunters and fishermen. The $15,000,000 which it yields to the commercial world is nothing compared to the tremendous revenue coming into the state beyond the resources which we have built up in our fishing and hunting grounds here in the state. Now my friends, you have made considerable progress. You have seen the things that you have fought for accomplished and I dare say that many feel that the job is done. The job is not done and because you see things going like they ought to go, does not mean your job is finished. If you want this to continue, I want to tell you that you have three years of the hardest work you ever saw of **educating** the public to the idea that you are doing the right thing for them, and unless you do that, your program will fail again, and I can't emphasize that too much. It is not the popular thing to go out and arrest 2,000 people for violation of fish and game laws. Unless you can sell the people of this state on the idea that what you are putting into effect is a good thing. You have made considerable gains, and I think you are proud of the gains you have made. To keep these gains you have to work and work hard to teach the people who do not know the value of the program you have put into their hands. You can't rest on your oars; you can't sleep on your job; you have a tremendous job ahead of you and unless you work at it for a period of three years, you will lose the gains you have made. So I beseech you, my friends interested in these subjects, to keep constantly and eternally at it so that all people may be convinced that your program is **the** program. I want to say that as far as I am concerned, the state department of conservation and I are merely your agents to carry out your program and the thing that you most desire of this state, and we are going to be at your command and at your service for three more years in order that you may have your program firmly established. More power to you for the great program you have instituted in Louisiana.

GOVERNOR JONES
Addressing the Baton Rouge convention of the Louisiana Wildlife Federation.

URGE NATIONAL PARK IN TENSAS PARISH

The Tennessee Academy of Science has passed a resolution urging the establishment of a national park in Tensas Parish to be known as the Tensas National Park.

A bill to establish this National Park is now pending in Congress.

The resolution, which was given wide publicity in the press of Louisiana and newspapers throughout the state, is as follows:

"Whereas, A bill has been introduced into Congress to permit the purchase of land in Madison Parish, La., to establish there a national park, to be known as the Tensas National Park;

"Whereas, included in the proposed park is the last large stand of virgin timber in the alluvial bottomlands of the Mississippi River;

"Whereas, The Ivory-billed Woodpecker, a North American bird that is perilously close to extinction, still exists in the forest included in the proposed park, and the species will have its best chance of survival if this forest is preserved;

"Whereas, Almost every form of wildlife native to that region of North America still lives in this forest, itself almost unchanged, thus making it the best example of its type of American wilderness;

"Therefore, Be it resolved by the Tennessee Academy of Science, that the Tennessee Academy of Science in regular session recommends and urges the establishment of the Tensas National Park in Madison Parish, Louisiana.

Soil and Water are Basic Principles Of Real Conservation

by
Dr. Ira N. Gabrielson*

It is a real pleasure to be here with you and discuss some of the problems of conservation. I have been asked to talk to you about some of the basic philosophy of conservation. I notice you call yourself the Wildlife Federation, which is a good thing. I am interested in it personally, and I assume you are more interested than I. If you confine your interest and effort to putting a few more fish into the streams you will not continue to enjoy the great outdoors of this country. Now, as in the beginning, all life; human, animal and plant is dependent on soil and water. I have heard a wise man say that human life is totally dependent on the top 14 inches of soil and like all epigrams, it has a great deal of truth in it. How we treat and what we do with the top 14 inches of soil, because it can produce, will determine whether we are going to have a particular place to live.

Let us go back to other people in other lands and times in the history of the world and see how they have abused these resources. They are so far gone, the soil and water are totally destroyed, that there is no productivity and some of the great majestic lands are vast areas of shifting sand and are of very little value as we see it. All these things we are interested in, things we eat, food we eat, comes from two things, soil and water. When we talk about conservation, we mean the intelligent use of the soil and water of this land and the products we take from them. Allow me to point out some things that are true, a given acre of land and water can sustain only so much life. It has so much productivity, which can produce so much living matter.

STOP EROSION OF THE SOIL

When we came to this country we found a land inhabited by few people. We had vast forests with a comparatively small population of Indians, enormous amounts of wildlife. We have put in competition with those things we found, 130,000,000 human beings living off that same land and productivity. It means that food, plants, and vegetation and other forms of animal life are dependent on the same soil and water. We replaced them with things we needed. We cut down forests, planted crops, and destroyed other forms of life to make way for ourselves. We hear people say they'd like to go back to the good old days. To the kind of life we had when Columbus discovered America. We can do that but one way, and that is to give it back to the red men. If we do that Mother Nature would take care of the job of putting back, the fish, fowl, forests and minerals. Perhaps it wouldn't look like it did when Columbus came here, but in a few years, a hundred or thousand years, it would be back in productivity at the old stand. Nature would be at work building and maintaining life. I would like to remind you that all life, every living thing contributes to the maintainance and building up of the soil. Countless thousands of individuals live and die and return their bodies to the soil. Every farmer recognizes that, when he plows under a crop. Every time he hauls out a load of fertilizer, he returns to that land the product that it may continue to be productive. This is a background to think about. It means a lot to the human race as a unit. We can't do very much about restoring wild life unless we stop the erosion of the soil.

This article is reproduced from the address delivered by Dr. Gabrielson to the delegates at the Baton Rouge convention of the Louisiana Wildlife Federation on Saturday evening, May 10, which was also broadcast over WJBO, a Baton Rouge radio station.

I am interested in wildlife but I realize that you people in this state should never forget that you cannot carry on a wildlife program without guarding the resources of soil and water. Fight for good soil conservation in your home town, prevent pollution of streams. Go out and plant quail and show that you are interested. You will gain permanent results by doing some of these things. Those who are interested in soil conservation itself cannot do a good job without doing a pretty good job of conservation and restoration for wildlife.

I am going to discuss a program more familiarly known as the migratory water fowl program which happens to be a job above all else given to my organization to do. Like all the rest of you, I saw the vast numbers of Migratory Water Fowl go down the hill at a high rate for a great many years. On looking in the field of wildlife for twelve months of the year, I had the opportunity to travel and I realized what was happening, and perhaps it came home to me when we started this restoration program, about which we have talked for many years, but never had the courage to do much about. I had not hoped that it would succeed as it has. I was as a drowning man going down for the third time. There was a straw to grasp at and we had to grasp this time for we probably never would have another chance. We based this Migratory Water Fowl program on two basic principles. They are sound. I do not think you can build any wildlife program successfully in your state or any other state with its wildlife, fish, fowl, or fur bearing animals without basing it on the two principles. It is just as important to have places for birds to lay and hatch as it is to have a place for them to live. No duck was ever produced without another duck laying the egg first. One of the things that makes it difficult is the fact that whoever has pointed a gun at a duck believes himself to be an authority. We did two things to carry out the program and at the same time make regulations to carry out the plans which were effective. I can tell you frankly that that program was mighty successful. While the water was drained or dried up because of the drought, the birds were forced into smaller and smaller areas. That looked like just as many birds in that particular area. As a matter of fact, the birds of other areas were concentrated in that one area. It made it easier for those fellows who liked to hunt to get at them. We build better roads and canals to get the birds.

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* Director U. S. Fish and Wildlife Service.

Highlights of Dr. Gabrielson's Address

. . . . . "You people in this state should never forget that you cannot carry on a wild life program without guarding the resources of soil and water. Fight for good soil conservation in your home town, prevent pollution of streams."

> **. . . . . "You have to get money enough to start a restoration program . . . . . Birds have to live twelve months a year. It is important that they have breeding grounds."**

"We would have come to the point where an entire closed season on migratory waterfowl would have been necessary if the cutting and draining of marshes and waters had been continued in America."

> **. . . . . "You have a good set-up in this new Wildlife Federation, better than anything else you have had in this state. You've got a better chance, better opportunity."**

"I would like to tell you this . . . hunters wishes should govern as long as they are intelligent wishes . . . The Conservation Department has a right to expect certain things from you . . . It has a right to expect a strong united organization to back their work.

> **. . . . . "This state is more productive than many other states. You have a new conservation department which I know will do a good job. I can tell you that you're going to get all the help we can give to help you do the job you want."**

. . . . . "We have made more progress in the past ten years than we have done for the previous forty in building back the resources of this continent. You can do what other states have done with sane, basic, intelligent methods of wild life preservation . . . it depends a lot more on you than it does on me or the conservation department."

DR. IRA N. GABRIELSON

Director U. S. Fish and Wildlife Service, Washington, D. C.

BREEDING GROUNDS ARE IMPORTANT

You have to get money enough to start a restoration program. There is a lot of argument among fellows who are interested in this as to whether it is more important to eat in summer or winter. It is just that simple. Birds have to live 12 months a year. It is important that they have breeding grounds. You now tackle the most difficult conservation job you can imagine and if you fail, its your fault and no one else's. No one is to blame except yourself. Any state that wants quail, can have it. Your neighbors can't take them from you. It is your fault if the deer and turkey are gone. You could do something about it and can do something about it if you want to do it bad enough.

We in this country could do the very best possible job of conservation, and still not see the Migratory Water Fowl increase, if other countries do not help carry out this program. It is true that most of the ducks and geese we see are raised in Canada and Alaska. They raise the greatest majority of birds that are produced in the world. I would like to point out to you that we in the United States furnish wintering grounds for these ducks and geese raised in Canada or Alaska. We could not do a good job of maintaining and preserving the breeding grounds, if the birds are without food during the four to six months they are here. It has the relative importance of winter and summer feeding grounds. It is just exactly the same question, whether you should eat in the summer or winter.

PROGRESS MADE ON RESTORATION

The Restoration Program has worked better than I ever dreamed. You might say the regulations will interfere with your shooting—they will, with my shooting as well as yours. We made those regulations not to make it easy to get as many birds as possible in the shortest time but to spread out the surface so that we will all get some of the ducks and still have some to go back for breeding stock. And we are going to keep right on doing that as long as we want conservation. We would have come to the point where an entire closed season on migratory waterfowl would have been necessary if the cutting and draining of marshes and waters had been continued in America. We drained 100,000,000 acres in about 75 years. Not all of that was marsh land, but it was of value to the birds at some time of the year. I want to point out that you can't take 100,000,000 acres of marsh land on the continent of North America without reducing the number of birds. We put back some of those marshes. The total is between three and four million acres in process of restoration. Those are marshes we could buy and put back in the breeding grounds of the United States, up and down the country, where birds flock together. It was equally important that we do all those things and do them now. We have to keep right on doing that if we are going to have a continued increase in the migratory waterfowl population. In the past six years we had room for twice as many birds than we have at the present time. Go on with building the program to the highest productive point so that we can provide for a larger group of stock in the future years as they go north and return south again. I have talked about that because you can do the same kind of job with any kind of wildlife you are interested in.

Now you have a good set-up in this new Wildlife Federation, better than anything else you have had in this state. You've got a better chance, better opportunity. People understand more than they did a few years back. This state is more productive than other states. You have a new conservation department which I know will do a good job. I can tell you that you're going to get all the help we can give to help you do the job you want to do.

We have heard a lot about the sportsmen wanting this and that. I would like to tell you this—sportsmen wishes should govern as long as they are intelligent wishes. Sportsmen have a right to have an intelligent long-range program. If you are smart you will insist on it. The Conservation Department has a right to expect certain things from you. It has a right to expect a strong united organization to back their work. There are plenty of people who would cut down the last tree, catch the last fish and kill the last bird in the community regardless of the consequence to your community and future of that community. Your department has a right to expect you to support the program. They have a right to expect you to go out and teach people who do not understand as well as you what the questions are all about. The fact that you are here in this convention as delegates from your community is the best guarantee that you do have that understanding. And it is up to you to go back and make people understand these fundamental things. It is up to you to raise the standard of sportsmenship. You must make people see that as we develop increased population, we must have more low land to use for other purposes. We must provide a way to get more out of

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Louisiana Conservation Agents Attend Training School

For the first time in the history of Louisiana as far as is known, Louisiana Conservation Agents are being specially trained in methods of law enforcement and are being taught law, court procedure, and other related matters.

The Conservation Training School started on May 1st and is being held at Camp Salmen, a Boy Scout camp, located west of Slidell in St. Tammany Parish. The agents were divided into two groups in order that enforcement work throughout the state would not be disrupted. Each group is to stay at the camp for twenty days. The first group stayed from May 1st to May 20th, and the second group arrived on May 20th and is to remain for a period of twenty days. There were 60 agents in the first group and about that many in the second group.

The idea for the training school belongs to Don L. Simon, Chief Enforcement Officer of the Department of Conservation, and he believes that great benefit will come to the Department as a result of the school through increased efficiency on the part of the Conservation Agents.

Semi-military regulations prevails during the camp and the men are housed and fed on the camp grounds and are not permitted to leave camp without special permission. Reveille, lights out and other military regulations are in force during the camp period.

W. W. Twigg, auditor of the Enforcement Division, and former army officer, is in active charge of the 40-day camp. Daily lectures and demonstrations were given during the first part of the school on fish, birds, animals, first aid, firearms instruction, elementary seamanship (handling of boats), forestry, woodcraft and other subjects, and this same course of instruction wil be repeated for the second 20-day period of the school.

A typical day at the camp-school goes something like this:

Up at 5:30 a. m. Flag raising exercises. Breakfast, Bedmaking, etc. Classes at 8 a. m. Lunch at noon. Recreation period. Target practice and more classes. Dinner. Rest period. Moving pictures or instruction at night, and then to bed.

Instructors during the first part of the school included Ambrose Daigre and J. E. Morgan, bird and fish identification; Mr. Simon, conservation laws; Ben Dahlen, pistol instruction; Dr. Nelson Gowanloch, identification of reptiles and predatory animals; U. S. Federal Agents; Lawrence Merovka and Houston Gascon; George Wilson, Legal procedure; Mr. Cabirac and Lt. Henry George, First Aid; Major James Brown, Wildlife; M. E. Brashears, Forestry; F. P. Callaghan, with the U. S. Fish and Wildlife Service, Washington, Federal laws.

May 20th was "graduation day" for the first group of agents, who finished a twenty-day period of training. Prior to their departure for their homes and work in the field, the agents heard an address by W. H. Hodges, Jr., Director of the Department of Conservation, who commended them for the fine work they had done during the training period. Mr. Hodges predicted that the Agents would be better qualified to carry on their enforcement work as a result of the knowledge learned during the training course.

Also present during the "graduation" ceremonies was Fred J. McCormac, chairman of the Board of the Department of Conservation and other officials from the Department.

The new group of Agents who arrived at the camp during the day on Tuesday, May 20th, begin their full course of study and instruction on the morning of May 21st, and will continue the same for a period of twenty days. The same instructors and the same course of instructions given the Agents during the first part of the camp will be repeated for the benefit of the second group.

The school is being conducted along military lines, with the khaki uniforms which the agents are required to wear at the camp adding something to the similarity. Agents who must buy their own uniforms—khaki shirt and trousers and black ties, are attending the course without charge.

The site of the camp is ideally located. It has small comfortable cabins which house the men, four to a cabin. There is a large mess hall, a large assembly and class room, swimming pool, shower baths and other facilities.

Cooks regularly employed by the Enforcement Division of the Department of Conservation on Conservation boats used in patrol work are in charge of the kitchen and the feeding of the men at the camp.

While other states that have model conservation agencies have been conducting training camps for their agents for years, this is the first time in Louisiana that such a school has been undertaken.

The Department of Conservation has received considerable favorable comment from all parts of the State since the training school program for conservation agents has been put into effect.

Governor Sam Jones commented favorably on the school plan in an address delivered before the Louisiana Wildlife Federation at its annual convention held a few weeks ago in Baton Rouge. He stated that it was just as important for conservation agents to be trained in their work as it was for police officers to have special knowledge of law enforcement methods.

The pictures on these two pages show Louisiana Conservation Agents in various phases of action at the training camp. In formation—class room lectures—studying birds and fish—stopping cars, proper approach, target practice—recreation—in the mess hall. Also shown is a view of the kitchen with the conservation cooks in charge and Bayou Liberty located on the camp grounds with conservation boats in the background.

Leading conservationists throughout the State have also expressed gratification over the action of the Department of Conservation in making possible the training program for its agents, because, according to their concensus of opinion, Louisiana will get the benefit of their training, through better and more efficient enforcement of the State's conservation laws.

Chief Enforcement Officer Don L. Simon has been supervising the training courses at the camp with W. W. Twigg, auditor for the Division and former army officer, in active charge. Classes are held throughout most of each day, with short recreation and rest periods in between the class work. Breakfast is served at 7:00 A. M., and classes begin at 8:30. Lunch is served at noon, classes again, with supper at 5:00 P. M., recreation, and classes at night until 9:30 P. M. Lights go out at 10:00 P. M.

The training camp for the second group of agents, which started on May 21st, will continue for three weeks, and will end the second week in June.

No longer will agents be given a badge and told to go to work—from now on Louisiana Conservation Agents will know how to be real enforcement officers, will know something about approach, court procedure, first aid, marksmanship, game management, and other related matters that should assist them in more efficiently enforcing the conservation laws.

WILDLIFE FEDERATION URGES MORE AUTHORITY FOR CONSERVATION DEPARTMENT

[Continued from Page 7]

ventions, and the selection of directors and officers.

The report of the Resolutions Committee was read by Robert Learnard, Chairman of that committee, and adopted.

Eleven directors were nominated on the floor of the convention for the nine places on the Board as directors-at-large. Following the balloting, the results were announced as follows:

DIRECTORS-AT-LARGE

S. C. Knight of Elizabeth; C. K. Montgomery of Vermilion; Charles L. Wurster, Sr., of Catahoula; Judge Gus Voltz, of Alexandria; H. A. Achee of White Castle; Henry C. Sevier of Tallulah; Fred M. McCaleb of New Orleans; Charles L. Horne of Shreveport and Bryant A. Bateman of Baton Rouge.

Following selection of Monroe as the next convention city, the Federation adjourned, and the officers later met with the Board of the Department of Conservation and presented to them the recommendations of the Federation as embodied in the resolutions adopted by the convention.

THE CONVENTION RESOLUTION

Some eighty separate resolutions on various subjects were presented to the convention and these were combined and a consolidated resolution embodying the various subjects was presented to the convention and finally adopted. The resolution is as folows:

"WHEREAS, the Louisiana Wildlife Federation, Inc., is in thorough accord with, and unanimously approve the efforts of the Department of Conservation of Louisiana with respect to their activity in behalf of conservation:

"WHEREAS, it is the consensus of opinion of:

1. The committee on Migratory Water Fowl and Shore Birds
2. The committee on Upland Game Birds
3. The committee on Game quadrupeds
4. The committee on Fresh Water Game Fish
5. The committee on Miscellaneous Conservation Regulations of the Louisiana Wildlife Federation, Inc., and those members of the Federation in attendance at the convention held in Baton Rouge on May 10, 1941, that the conservation of wildlife in Louisiana can be best regulated by the Department of Conservation.

"THEREFORE BE IT RESOLVED THAT: The Louisiana Wildlife Federation through its committee do recommend to the Department of Conservation that they request the Legislature of the State of Louisiana to vest in the Department of Conservation the following authority to-wit:

1. To open and close all seasons on all wildlife.
2. To establish bag or creel limits.
3. To define the means and methods of taking game.
4. To establish hours of taking wildlife.
5. To have authority to make rules and regulations with respect to all things pertaining to the conservation and propagation of wildlife in Louisiana.

"BE IT FURTHER RESOLVED THAT: The Department of Conservation recommend to the Legislature that they establish uniform license fees covering the taking of all fresh water game fish by means of artificial baits, lure, live bait (worms excepted).

BE IT FURTHER RESOLVED THAT: The Department of Conservation recommend to the Fish and Wildlife Service of the Department of the Interior of the United States Government, that:

1. The Dove season be fixed in Louisiana at a period which in the opinion of the Fish and Wildlife Service will be best suited to dove shooting in Louisiana.
2. The hours be fixed for the taking of Migratory Water Fowl and Shore Birds from day break to 12 o'clock noon.
3. The season for taking Migratory Water Fowl and Shore Birds in Louisiana, be fixed at a time which in the opinion of the Fish and Wildlife Service will be best suited to shooting in Louisiana.
4. The bore of fire arms used in taking Migratory Water Fowl and Shore Birds be unchanged.

"BE IT FURTHER RESOLVED THAT: The Department of Conservation enforce Section 17 of Act 68 of 1932 with respect to regulating the size of seines in taking fresh water commercial fish.

"BE IT FURTHER RESOLVED THAT: The Conservation Department of the State of Louisiana if and when vested with the authority to open and close seasons on wildlife,

1. Establish bag and creel limits
2. The means and methods of taking game
3. Hours of taking wildlife
4. Authority to make rules and regulations

that they take into consideration the recommendations of the committees of the Louisiana Wildlife Federation, Inc., and the resolutions submitted by the various units and attached hereto and made a part hereof.

"BE IT FURTHER RESOLVED THAT: The Conservation Department of the State of Louisiana be urged to continue the publication of the Conservation Review."

SOIL AND WATER ARE BASIC PRINCIPLES OF REAL CONSERVATION

[Continued from Page 11]

each individual piece of game than we have done in the past. We have doubled the population of continental birds in the past six years. In 1934 and 35 there were 445,000 duck stamps sold. This year the returns are not all in yet, but there will be somewhere in the neighborhood of 1,250,000 duck stamps sold.

SUCCESS DEPENDS ON COOPERATION

We have made more progress for the past ten years than we have done for the previous forty in building back the resources of this continent. You can do what other states have done with sane, basic, intelligent methods, of wildlife preservation. Whether you do it or not depends a lot more on you than it does on me or the conservation department. No matter how long or hard they work or what conditions they work under, they can do it only by the intelligent understanding and support of the community. No one can do the job of restoring these things and retaining productivity without the intelligent understanding of public support. If you are going to have that kind of a program, if you would have more of your resources left, start up hill again. The lands and water here are more productive than many other state's. It is entirely up to you. I hope you have the courage and vision to see your chance and go ahead with it. I want to assure you that we, in the Fish and Wildlife service, will do all we can to help you put it over.

Warning—The bald eagle is protected by Federal law.

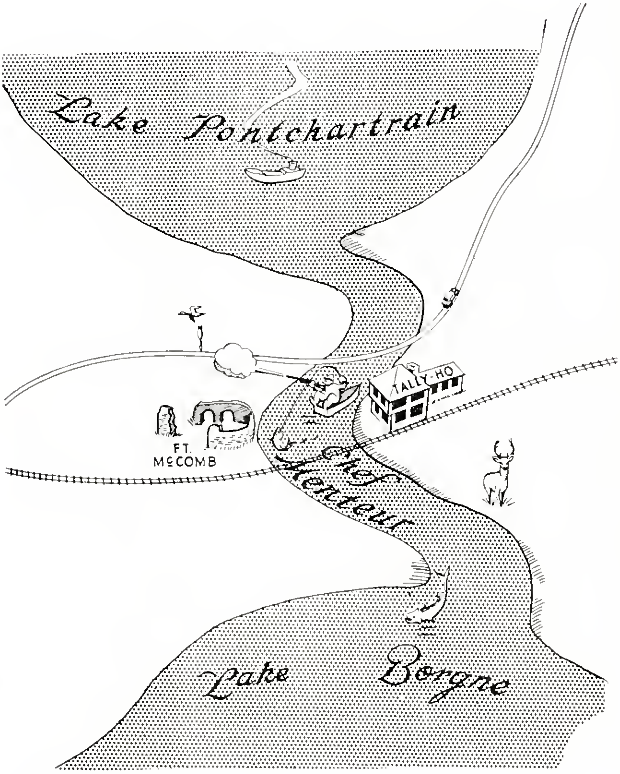
A $500 fine is the penalty for destroying one of these birds.

THE FISH TALLY HO THE DUCK

by
Mary Land Lock

It is "TALLY HO" . . . . and it is the duck and the fish. But my yarn of the TALLY HO FISHING AND HUNTING CLUB, located on the Pass Chef Menteur, twenty one miles from the City of New Orleans, must begin "a long time ago" . . . . For it was a long, long time ago that this masculine stronghold and second oldest hunting and fishing club in the United States came into existence.

The origin of "The Tally Ho" is as obscure as the horizon in a Louisiana marsh "on a good duck day". Its existence, according to my excavations into history and legend, must have been caused by General Andrew Jackson's desire for a battery to be erected at the confluence of Pass Chef Menteur and the Bayou Sauvage, prior to the Battle of New Orleans. General Jackson's battery called for a military road to be built running parallel to Bayou Sauvage. This road brought forth travel and the Tally Ho Four-in-Hand Coaches. "Tally Ho" at this early date literally meant "urge on", for it must have been men of courage and imagination who penetrated this cypiere in their search for the pleasures of fish and game, or shall I say, "wildlife"! Their virile spirit must be reincarnated in the present day "Tally Ho'ers" whose jubilation and migration is recurrent.



FIRST "TALLY HO" CLUB BUILT ON BAYOU SAUVAGE

The Chef Menteur is one of the gateways to the east end of Lake Pontchartrain, and connecting Lake Borgne. In the now Parish of Orleans there is a tract of land in the shape of an isthmus projecting itself into Lake Pontchartrain, not far from The Rigolets, and terminating in what is known as Pointe-aux-herbs. It was here that the first "Tally Ho Club" was built—on the Bayou Sauvage, near "The Chef". I can imagine this crude structure, built of rough cypress logs and plaster, mixed with Spanish moss sitting high above the sea marsh or perhaps on a chenier. In 1800, the province of Louisiana was secretly ceded to France by the Treaty of St. lidefonso, and promptly sold by Napoleon to the United States. According to tradition, the first Tally Ho Club was built several years after the Louisiana Purchase. A brief history of the tract of land known as "Chef Menteur Plantation" is interesting as the original and present club were once a part of this vast plantation. By a patent dated at New Orleans, March 10, 1763, Louis de Kerlerec, Knight of the Royal and Military Order of Saint Louis, Captain of the King's Vessel, Governor of the Province of Louisiana, and Dennis Nichola Foucault, acting as ordering commissioner in the said Colony, considering the petition and by virtue of the powers vested in them by his Majesty, granted unto Sieur Maxant the land asked by him at the place called Chantilly, starting from the boundary corner of the thirty arpents at said place, which we have granted the ninth instant to the Sieur Dufossat up to the point called "Chef Menteur". In this document we find the reservation to the King of all necessary timber for the building and repair of ships. This custom of reserving the timber on public land for ships was followed by our own government, and in the early land titles of this section we find section reservations of oak forests. This land passed from the succession of Gilbert de Saint Maxent to Don Louis de Clouent at a public auction in 1796. Don de Clouent sold the property to Don Bartholeme Lafon in 1801. After the death of Lafon the land was divided into forty lots and sold to various people. In 1869 the Louisville and Nashville railroad began running regular trains between New Orleans and Mobile, which opened up a virgin section of Louisiana. Because of the railroad, a new "Tally Ho" was erected on the east side of "The Chef". A conference of New Orleans sportsmen was held in the office of the late William Goldenbow, of the old shipping firm of Goldenbow and Kelly, and the first regularly organized meeting was held. Officers were elected; there were twenty-four charter members. William Goldenbow was elected Captain and we read in a letter written by D. Alf. de Pas, one of the governing committee that: "at the first annual dinner of 'The Tally Ho', the board groaned under the weight of goodly commodities of solids and liquids and for one to eat a courtbouillon was enough to make a man lick his fingers up to the back of his neck and put him in the best of humor with all mankind."

In 1911, the first highway was built to the Gulf Coast and Mississippi . . . . And so they came . . . . by iron horse . . . . "tally-ho" . . . . and bateaus. A short history of "The Tally Ho Club", written by D. Alf. de Pas in 1900 tells: "This section of Louisiana, with its countless bayous, and lagoons teemed with ducks, snipe and deer, and the best of fishing could be had during the entire year. It would have quickened the heart's blood of anyone having a drop of sporting blood in his veins to have been persent when the 'cracks' returned unloading their pirogues of ducks. Deer and snipe hunting was also excellent, and many a deer was divided among the members and guests by those who went out with the hounds. The club became famous for its "trap shoots" and numerous national sportsmen, including Theodore Roosevelt, who took part in the "shoots". "Joie de Vivre" became the toast of the club. Creole gourmets and tipplers swapped tales with cajun trappers at these souirees. Times Saloon, New Orleans, seems to have supplied a city hangout for these waggish blades for I uncover a "Tally Ho" notice of meeting reading: "All members intending to participate must deposit $3.00 at Times Saloon, 814 Gravier Street, on or before Saturday, May 23, 1903." This notice reads like a subpoena, but perhaps this "lot" were a bit irresponsible and, I am sure, altogether interesting.

■ **An exterior view of the Tally Ho Hunting and Fishing Club Located on the Pass Chef Menteur, twenty-one miles from New Orleans.**

FEW WOMEN HAVE EVER ENTERED THE "TALLY HO" CLUB

Interesting, too, is the fact that few women have ever entered this glorified garconniere. For many years I had cherished a desire to invade this sacred retreat and the day did come, a l'heure. Even now . . . . a journey to "The Tally Ho" is something of a safari. One travels by car to the Chef Bridge, then either boats about a half mile, or walks the banquette with "The Chef" on one side and wild cane, marsh grass and amphibious wilderness on the other. Great determination is needed to get past the "Tally Ho" galarie, for to rock in one of the huge chairs and fan a latanier and watch "The Chef" is a most pleasant way to drift into a state of permanent inertia. But consumed with curiosity, I could not linger and fairly dashed into the most manly room I have ever seen—a fireplace and two fine mallard paintings demand one's foremost attention. But just then my ever snoopy eye leaped upon an aged ledger, half buried under a mound of assorted boating and sporting magazines. Every page of this prodigous register (for that's what it was) flourished signatures of leading characters in our own historical fantasia. Redundant on its pages is the name of J. M. Kinabrew, who has been Captain for years and years, having joined in 1904, when the entry price per share was three hundred dollars. He has been instrumental in preserving the sincere, sportive hospitality prevailing today. Second in command of this terrestrial ship of the cypiere is Lieutenant H. F. Hertzer. Louisiana swamp orchids should go to F. W. Hopkins, Secretary and Treasurer, for guarding and preserving all records of the Club. There are thirty members of the organization at this date, and the distinction of "the oldest living member" goes to Sam Bonart, whose membership dates back forty-five years.

Tearing myself away from this panorama of names, I found a muchly festive table waiting. The menu consisted of:

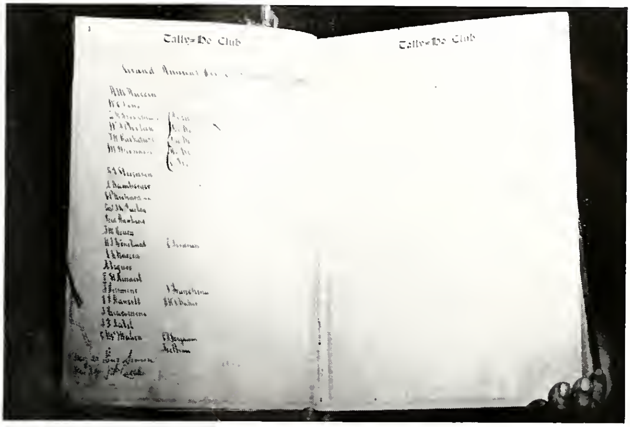
MENU

Cocktail Chef Menteur   Oignons, Olives
Soupe aux Crabes Tally-Ho Club
Carrelet Grilles au Beurre Lac Borgne
Pommes de Terre au Gratin Leona
Croquettes de Crabes Poncharraia
Salad Bayou Sauvage
Fruits Marche Francais
Cafe-Cognac
Vin Blanc Chateau McComb
Absinthe, Helas
Whiskey d'Ecosse et des Iles

And a motto:

Today's Wine I Drink Today;
Tomorrow's Pain I Bear Tomorrow . . .

After which resplendent fare I groaned, and not "the proverbial board". At this time I saw my chance to capture Benard, who has been caretaker, guide and "everything important at the Tally-Ho" for some twenty years, for a special personal tour. Our first "port of call" was the kitchen, where I had hopes of delving into the cook book and the personality of the fabulous Leona. All adjectives desert me in describing this so-called kitchen . . . . its huge wood stove . . . . the strings of brilliant red peppers . . . . the constant "eat, drink and be merry" song of the cherry kettle . . . . and Leona, who has created gastronomical masterpieces at the Tally-Ho for twenty years. In an old history of Louisiana I found this description, "this dish, when brought in contact with the human pallet pro-



Tally-Ho Club

Tally-Ho Club

■ **The Tally Ho Club register. According to tradition the first Tally Ho club was built several years after the Louisiana Purchase.**

duces a gastronomical effect not soon to be forgotten". And you will know the true delights of this description and will not soon forget either, when you eat:

SOUPE aux Crabes Tally-Ho
by Leona

1 dozen large fat crabs
1 medium size onion chopped fine
1 clove garlic chopped fine
2 tablespoons celery chopped fine
1 tablespoon lemon cut fine
2 tablespoons flour
2 tablespoons parsley
4 tablespoons cooking oil
1 can tomato paste
1 box vermicelli
3 quarts water

METHOD:

Season some water with spices, salt and pepper, enough to boil one dozen crabs. After they are cooked, let cool and pick out meat and put aside. Take a spoon and scrape the inside of crab shell in your three quarts of water and let come to a boil. Use that water for stock after it comes to a boil put through a colander to drain. Then put cooking oil in a frying pan. After this is hot, brown the flour. When well browned, put in onion, garlic, celery and lemon and let cook ten minutes. Next put in tomato paste and let fry until it leaves the pan dry when stirring with a spoon. Then put the tomatoes in the stock that has been put aside and let this boil for twenty minutes. After that put in the crab meat and let come to a boil. Then put the vermicelli in and boil ten minutes longer. Season to taste and put in one bay leaf and a little thyme. Serves eight people.

LIMIT ON POKER IN OLD DAYS WAS FIFTEEN DOLLARS

A long perron behind the kitchen leads to the small card room. A welsh cupboard in the corner holds glasses and bottles and—the whimsical chairs and table hold a circle of "gamy ghosts". Here fifteen dollar limit poker was played in the old days by the light of a crockly oil lamp. Returning through the "big" room, I walked into the bed room. Beds simply jumped at me. Thin, prehistoric, iron affairs, overhung with baires. On the wall behind one of these abnormalities was a sign reading: "This is my bed and I do as I **damn please**." At this point I again saw my opportunity for a few quiet words with Benard on hunting and fishing, after which I am sure he felt the third degree would be a real joy.

I had to know . . . . what of the ducks . . . . what of the fish . . . . where and how. Benard graciously told me **all**. The hunting around "The Chef" is still one of the country's best. Numerous lagoons open into Cedar Bayou, Bayou Dupont, Bayou Catherine, Bayou Benard, Crevet Bayou, Blind Bayou and others. Ducks are plenteous and most prevalent are the French Duck (Mallard), Paille-en queue (Pintail), Gray Duck (Canvasback), Congo, a name used for this duck because the Congo slaves were the smallest brought to the markets of New Orleans, (Green Winged Teal), Autonniere (Blue Winged Teal), Conard Gris (Gadwell), Gotdamn (Ruddy Duck), and the Dos-gris (Scaup Duck). There are more summer ducks (Wood Ducks) now than ever before in years, but of course there is no open season for them. I had heard that "The Chef" was a very deep stream and Benard told me it was from forty to ninety feet in front of the clubhouse.

FISHING IS ALL YEAR ROUND SPORT IN LOUISIANA

It seems incredible to a large number of people that in Louisiana, and at "The Tally-Ho" one may fish every month of the year. Unbelievable too, is the fact that a live shrimp on your hook will get you strikes from the green trout (large mouth black bass), perch, sac-a-lait (crappie), speckled sea trout (weakfish), channel bass (red fish), flounder, catfish, gaspergou, pompano, croakers and sheepshead, and all in the very same spot.

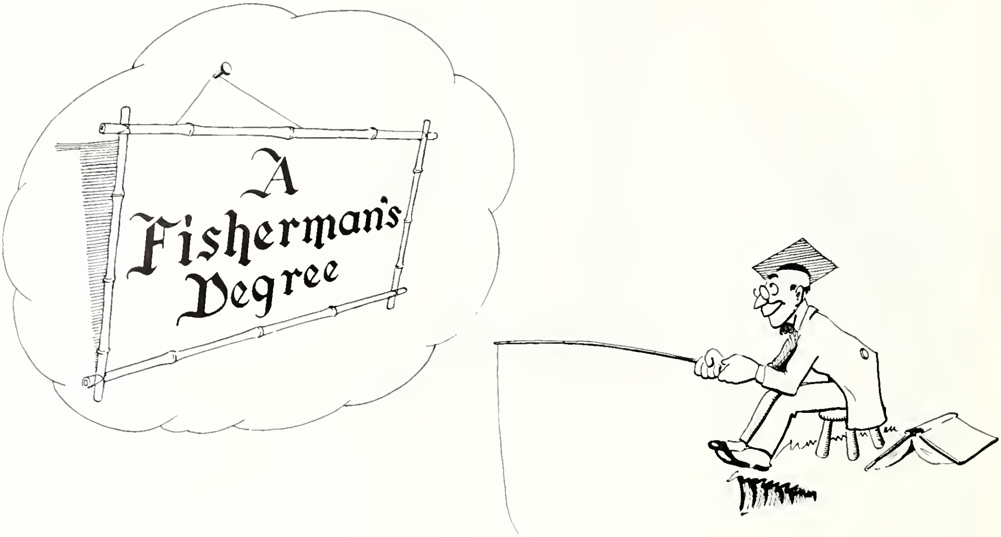
Star Bayou is known as "the best place". Bayou Labatuer, Cedar Bayou, Bayou Thomas, Bayou MaGill are also good. There is FUN in the fall trolling for green trout in Lake Catherine Canal and Bayou Sauvage, using artificial bait. And can you imagine that the nomadic trail of the silver king and (I think) king of finny kings, the tarpon, follows this incredible "Chef"? The best "tarpon times" are the summer and early fall months, and the "hot spots" are under the railroad bridge and at the mouth of Lake Pontchartrain. The old Florida method of still fishing with a mullet is the lure here to raise these husky paisley beauties.

The snipe are all gone from this section, and the deer are scarce, but a few are killed near Alligator Point.

I wished with Benard for the "good old days", when the club had thirty-five thousand acres under lease, and the wildlife truly did teem on land and water. But we are consoled by the fact that we have even now the most fertile field for hunting and fishing in the whole of our country.

GLOSSARY

Arpents—A former land measure, of 100 perches, which were 22 feet square.
Baires—Mosquito nets.
Banquette—Elevated sidewalk.
Bateaus—Boats.
Bayou—Natural canal.
Bayou Sauvage—Bayou of Indians.
Cajun—A french speaking man from the bayou country . . . imigrants from Acadia. Nova Scotia.
Chef Menteur—Named "Lying Chief" because of a Choctaw Indian Chief being banished to its shores due to his uncontrollable habit of lying.
Chenier—A mound rising from the swamp and covered with a grove of oak trees.
Courtboullion—Red fish cooked with a gravy consisting of white wine, seasoning, parsley, carrots, and onions.
Creole—White descendents of the Spanish and French settlers in Louisiana during the colonial period, 1699-1803.
Cypiere—Cypress swamp.
Galarie—Porch.
Garconniere—Bachelor quarters.
Joie de Vivre—Joy to live.
Lagoon—Pool in the marsh.
Latanier—Palm fan.
Lake Borgne—Meaning "One Eye" . . . the name given it by Iberville because it had only one outlet to the Sound.
Lake Pontchartrain—Named by Iberville in honor of the Minister of Marine of France.
Perron—Porch.
Pirogue—Small canoe like boat made from hollowed out log.
Point-aux-herbs—Herb point.
Rigolets—Narrows or straights.



(Illustrated by Roy Odom.)

by
Sam Mims

"You haven't been out of the hill section long enough to learn much," Roy said, as if determined to stop my flow of attempted humor.

"I'm merely trying to straighten out the kinks of the stream we are to fish in," I hastily explained. "You say we are going to False River, but that False River isn't a river at all, that it's really a lake—and then when I say it all sounds false and doesn't ring true . . . . . ."

"The history professor will explain everything to your entire satisfaction," Roy interrupted. "Prof will understand as soon as he sees you that you haven't been in South Louisiana long and, therefore, don't know much. He'll tell you how this lake got the name of False River and all about it."

"I'll still say it sounds fishey to me," I declared, trying my best to be funny. "It's a queer combination. You inviting a history teacher to fish with us in a stream called *False River*, which isn't a river at all!"

From day to day our arguments waxed and waned until the time arrived for us to respond to the alarm clock's call at four A.M., guzzle down a couple of hot cups of Creole coffee, crawl into our handsome 1934 model and speed to the professor's unpretentious house.

Five o'clock in the morning is a hard time for two ordinary fishermen like Roy Odom and me to absorb the erudite language of a university pedagogue, nevertheless for one full instruction period we listened drowsily to a recounting of the history of False River as we drove north from Baton Rouge along Highway 90. I didn't have a notebook along, so I can't report verbatim the words of our learned companion.

PAPA RIVER WAS CUTTING CORNERS IN THE OLD DAYS

Anyway, some two hundred years ago the Father of Waters went on a rampage. Old Papa River must have been in a mighty hurry. Maybe it was Mardi Gras time. Be that as it was, the old Mississippi got tired of going the long way around, so he began cutting corners and whittling a new trail down through Pointe Coupee Parish and leaving sixteen miles of channel out there to the west with no place to go—and that's False River today.

By the time burnished flecks of clouds in the east began indicating that another day was about to be born, I was so full of history that I felt chagrined at not having a casting rod that had been used at least once by Sieur de Bienville. And as for Roy! Well, he began talking precisely like Hernando DeSoto must have talked when he discovered the big river a right smart spell back. That history teacher had the boy spellbound.

Now, don't get the idea that the Professor isn't a fisherman and a sport. At a distance of forty feet he can flick the water out of a teacup and never dampen his fly; he can make a batteau crawl quietly over the water and never so much as rumple a ripple.

We had just nestled down in the boat. It was now light enough for me to observe the grim, determined expression on the prof's face, making me realize that history was in the making. I had never seen a prettier body of water or one that looked more like a piscatory paradise. (That's what the professor had called it—"a piscatory paradise".) Anyway, before I could get my pipe purring a swishing sound passed over my head, making me know that a fancy lure of some sort was in the air. A moment later I heard it skid across a lillypad. I was still fingering for another match when I heard the professor gurgle a phrase of some foreign language, followed by a splash that told me a bigmouth bass had made a pass at breakfast and had got himself hooked.

From the noise he made I knew he was a big'un and old. He must have been waiting at the dock for the landing of DeSoto. With the power of a tugboat (a little one, of course) he turned us about and headed for the shore.

Precisely at that moment the big red sun peeped over the horizon and cast a sharp light toward the west bank of False River and seemed to center its rays against a marble slab that I later discovered was a historical marker.

HISTORY MAKES THE PROFESSOR FORGET ABOUT FISHING

"There it is! There it is!" The Professor stood up and doffed his cap.

"He's got a big fish," I giggled to Roy, "but I don't see any sense in saluting him."

"Yep, Professor, you've got him, and he's a big-un," Roy said encouragingly.

Observing that the Professor wasn't handling his rod very skillfully I was about to utter some words of advice when he beat me to it, saying:

"There it is! There's Randall Oak! That's where James Ryder Randall wrote the words of that popular Confederate war song, the best of all American martial lyrics, 'Maryland, My Maryland.' " And then he released his rod and sighed.

Roy is quite agile for a man of wide proportions, so he deftly rescued our companion's discarded rod and began reeling in the recently vacated lure.

At last the Professor remembered that he was on False River and had been fishing. "Where is my fish?" he asked as if accusing Roy of purloining his catch.

"He's in Maryland by now," Roy said caustically.

"I'm sorry, gentlemen," the historian said woefully as he reached for his rod. Then he laughed merrily, following his chuckles with, "I daresay one can't mix history with fishing, eh gentlemen?"

Neither of us replied, although I am sure that for once we were in accord with the statement.

Not until this moment had the Professor discovered that Roy and I were here for the specific duty of getting food for our families. He had been so absorbed in history that he hadn't observed our bait bucket that contained fifty nice, sleek shiners, the most delectable morsel with which to entice crappie to "come and get it". But as impressive as our bait may have been to the finny inhabitants of False River it had the opposite effect on the Professor. He glared once at our bucket of bait, took a disdainful glance at our humble cane poles and tackle, heaved a sigh that rocked the boat, and carefully reeled in his line. Then, folding up his angular frame like a jack knife, he gazed mournfully across the quiet, lazy water.

Roy isn't anybody's lily of the valley, but he couldn't withstand this affront from his history friend. I felt myself blushing all over, but I honestly believe you could have lighted a cigarette on either one of Roy's jowls. He's as crusty as a mud turtle under ordinary circumstances, but when his friend curled a lip and sneered, well, it was too much for Roy.

Something must be done. It was up to me. There Roy stood literally shaking in his boots and looking like a faithful hound that's just been kicked by his master.

OUR FISHING EXPERIENCES INCREASED IN IMPORTANCE

Roy had made two errors and they were hurting him. He should not have proposed that we bring the Professor fishing in these sacred waters, the shores of which are lined with historic lore, but having brought him, we should have had impressive rods and reels. An ordinary fishing line, one end of which is tied to a cane pole with the other one holding a piece of lead and a fishhook that's stuck through the tail of a shiner, is not modern enough for a professor who keeps one brain focused on the future and the other one on the musty past. As baffling as it may sound, you've got to be a fly-fisherman to sport around with a history teacher who knows more about William The Conqueror than he does about his home-town banker.

Our fishing experiences in False River, as the weeks pass on, become more interesting and of vastly more importance. If the history teacher continues to improve the story of how that big-mouth bass led us to Randall Oak, another tale of Moby Dick will be off the press during the early summer. Only last night at a gathering of gullible gossipers at one of the L. S. U. eating places, the professor added a chapter. It appears, at this late date, that our Moby Dick of False River only docked at Randall Oak long enough for the professor to copy the inscription that we found on a marble slab, then headed straight away for Terrant's tomb.

Roy was there, fascinated with his friend's story and sanctioning every statement with bob of head. He had completely forgotten those hot blushes that sizzled against his jowls that morning when his friend sneered at our amateurish tackle. But this morning I was mean enough to try to make Roy remember.

HISTORY LESSONS HELP OBTAIN FISHERMAN'S DEGREE

"Roy," I said, "Your friend is not only a history teacher, but he's a history maker. It wouldn't surprise me at all if he doesn't soon add another chapter to this fishing story, recounting the manner in which Moby Dick of False River turned detective and is trying to discover who stole the jewels out of Madam Terrant's tomb a century and a half ago."

But my sarcastic slurs had no effect on Roy. "You've got to admit, Sam, that during one trip to False River you learned more history than you did in four years of college. You not only saw the spot where James Ryder Randall wrote 'Maryland, My Maryland', but you saw the famous Parlange home built by Marquis Terrant, and you saw the vault in which Madame Claude Vincent Terrant was buried and from which her priceless jewels were stolen."

And furthermore, Roy, always loyal to his history friend, has just proposed to me that we have a law passed that will permit only qualified men and women to fish in False River, and to be qualified you must have a Master's degree from Oxford where you majored in history, and you must be an expert fly-fisherman.

To which proposal I croak, "Aye, aye, good mate."

SWORDFISH CAPTURE IS PACKED WITH THRILLS

The catching of swordfish is probably our most interesting deep-sea fishery according to the Fish and Wildlife Service. The swordfish always it taken by harpooning and the harpoon must be thrown javelin style into the swordfish by a fisherman standing in a skeleton iron frame known as the "pulpit" on the bowsprit. When a fish is "ironed" it rushes off, towing the harpoon line with a keg acting as float at the end, behind it. When the swordfish is tired out from towing this float a dory is rowed out from the fishing vessel, by a fisherman who picks up the keg and then "lances" the exhausted swordfish with a lance similar to that used by the old-time whalers, and waits for the vessel to pick him up.

Cooperation Between Conservationists and the Louisiana Department of Conservation

by
Fred J. McCormac*

It is apparent to anyone that if those who are interested in the success of our undertaking will cooperate with us that there is a better chance of succeeding than if the interested parties do not cooperate. As many of us understand cooperation, it means working together. Before a group can successfully cooperate they must have an understanding of the problem. The proposition which has prompted many citizens in Louisiana to offer their services in cooperating with us is conservation. Our Department is charged with administering the affairs pertaining to replenishable natural resources and State Parks. A few of these resources are forestry, wildlife, fish and sea foods. The problem is very simple to understand yet it is not simple to solve. Conservation of our replenishable natural resources simply means to conserve our lands, waters and trees so that they can produce a marketable crop each year. If they are not restored to a production basis after the crop is taken, they cannot produce as good a crop as they have in the past and so if we destroy their productivity by not controlling soil erosion, pollution, forest fires, wild hogs, etc., each succeeding year our lands, waters and trees will produce a smaller crop of trees, wildlife and fish and if this is continued over a long period of years, there will come a time when we will not have any of these valuable crops. Many people are interested in hunting and fishing because it is a heritage that has been handed down and has become dear to Americans. Hunting and fishing activities are very valuable to our state. Do not think that you do not have a personal interest in conservational activities just because you do not participate in harvesting the crop. You probably do not go into the sugar cane fields to cut cane yet if our sugar cane lands were being destroyed, even though they are privately owned, you would make an organized effort to prevent the destruction. Some may be interested to learn that the money spent to harvest and the annual value of the crop taken, even in its depleted state, of commercial and sporting fish and wildlife is approximately $57,162,500. The annual sugar cane crop is approximately $15,500,000. The size of the annual fish and wildlife crop depends upon food, cover and protection. Practically all of the food, cover and protection available to them are furnished by conserving the commercial replenishable natural resources such as trees, food bearing shrubs and bushes, pure waters that will produce fish foods, sufficient foods in the sea such as sardines, mullet and shrimp. So, it is apparent that unless the commercial interests are conserved and increased that the sporting activities will decrease. It is also true that if commercial interests do not harvest their crops properly that Louisiana will lose this very valuable industry such as oysters, shrimp, commercial fish and fur and in time more and more commercial operators will lose their livelihood.

Editor's Note—This article and the two pages of figures following it on pages 22 and 23 carry a message of utmost importance to everyone in Louisiana interested in conservation. This article as well as the table of facts and figures were compiled by Fred J. McCormac, Chairman of the Board of the Department of Conservation, and for years an outstanding leader in conservation activities in Louisiana.

We urge our readers to especially study the figures on the two pages following this article, because they tell, in a most interesting and convincing manner the great importance of conservation in the State of Louisiana.

ORGANIZED PUBLIC SUPPORT IS OF UTMOST IMPORTANCE

That is a brief discussion of the problem of conservation. How to have sound, permanent conservation in our state depends upon the machinery that is given the Conservation Department to accomplish the work. Before we can have sound conservation in Louisiana and keep it, there are a few things that the Department must have and keep. They are organized public support, sufficient money, sound conservation laws and a trained personnel. The degree of succe that conservation has attained anywhere can be measured by how much of the above four essentials they have had to accomplish the work. In Louisiana we now have some part of all four, whether we have enough of any will be judged by the results. Many believe we only have enough to make a beginning but that is something we have not had before. Due to our rich soil, the abundance of productive water and favorable climate, we are theoretically one of the richest states in the Union in replenishable natural resources but practically we are not so well off and here is an opportunity in Louisiana that should be capitalized.

We have organized public support in the Louisiana Wildlife Federation and it is hoped that this organization will continue to grow and that everyone in the state who is interested in perpetuating our replenishable natural resources will join them in their work. Individual conservationists and local conservation clubs are important but we doubt seriously if these local clubs or unorganized individuals are strong enough to appear before the Louisiana Legislature and obtain an appropriation of money or to close or open seasons on shrimp, fish or wildlife or to raise or lower bag limits on birds, deer, game or commercial fish. However, if after investigation it is found advisable to do any or all of these things and there are many active members of this statewide organization in every parish consulting and advising with their local Senators and Representatives, it is obvious that any constructive changes that are necessary will have a good chance of success because our law makers will have been properly advised and had time to study the proposed changes, and will know that a large majority of our citizens want constructive, permanent conservation.

CONSERVATION MEANS MORE THAN HUNTING AND FISHING

If we merit and receive public interest, approval and support by giving the state sound conservation and there should come a time when, to continue the progress, additional money is needed, there is a better chance of getting it if a large group of our citizens are willing to pay for it than if there is no organized support for the movement. As our program progresses and people see that your Conservation Department is conserving and increasing our annual crop of commercial and sporting wildlife and fish, many of you who will have helped us will be proud to have had a part in making Louisiana a wealthier and happier place in which to live. In our work it will be many years before conservationists can cease their cooperative activities with your Department because there will always be those who would burn the last tree, destroy the last acre of land, kill the last muskrat or fish if it would produce them an immediate profit. No one objects to the legal taking of the products of Louisiana's lands and waters, but practice this harvesting by approved methods which will perpetuate these valuable natural resources. People who ruthlessly destroy our state with no thought of our future welfare are not helping our democratic civilization, they are destroying our nation and forcing us to continue to increase taxation also depriving many people of having the facilities of making a living and thereby driving them towards the dangerous thought that the government owes them a living. Let no one think that conservation merely means more for the sportsmen to hunt and fish. It is much deeper than that, however, sportsmen know that conserving our land and waters is not only the patriotic thing to do but if they are not conserved they cannot produce a crop of wildlife and fish.

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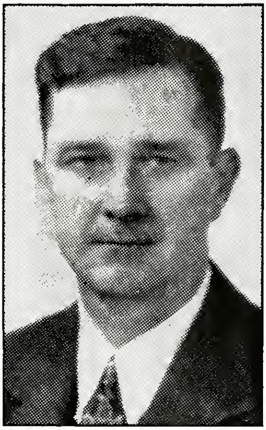
* Chairman of the Board of Directors of the Louisiana Department of Conservation.

Organized public support and sufficient money are necessary for our cooperative undertaking to be successful and we must have a trained personnel also constructive laws. It is very important that we have capable people in all of our departments and if the public will cooperate with our enforcement division that will be of tremendous benefit. We do not insist that you act as informers, however that is your privilege, but we do ask that you use your influence in seeing that the murderous outlaws who are destroying your state be convicted when they are arrested. We can and are arresting them but the only ones who can sentence them are the officials in your respective communities who have been elected by you to uphold the laws of our state. If you will get your judges, prosecuting attorneys, sheriffs and other officials to join your local organization and become interested in conservation that will help. It is important to you as well as to your conservation department that our conservation laws be respected because if they are not that will seriously effect the morale and efficiency of our enforcement agents. You should remember that Louisiana now has considerable federal money through the Pittman-Robertson Act to spend on perpetuating our replenishable resources and that before any of this money can be spent in any parish that the federal authorities have to approve the project. We doubt seriously if either the federal or state conservation authorities are going to spend any money in any parish in Louisiana where there is no enforcement of conservation laws because their investment would have no protection.

NEED POWER TO CONTROL AND PROTECT OUR RESOURCES

Your Department must have modern conservation laws. We do have many good laws but at the same time we have some that are approximately twenty years old and are completely out of date with modern conservation practices.



FRED J. McCORMAC

Chairman of the Board of the Department of Conservation.

We do not have the same elasticity of thought or action as those who are administering the affairs of a private business because all of our activities are regulated by law. Our activities should be regulated but, we must have laws that give us the power to control and protect your resources. The resolutions submitted by the Louisiana Wildlife Federation proposing to give Louisiana the same law whch is in effect in approximately thirty-six states is a very constructive move. If we have the authority to regulate seasons and bag limits in accordance with the supply of the crop that is produced we would have an excellent opportunity to perpetuate our replenishable natural resources. Our experience with our Senators and Representatives has been that they are for constructive conservation in Louisiana.

By broadening our program of cooperation we can increase its efficiency and when members of the Louisiana Department of Conservation and officials from the United States Fish and Wildlife Service from Washington meet with the members of the Louisiana Wildlife Federation at Monroe in March, 1942, there will be a mutual satisfaction that by our cooperative efforts we have advanced our program to conserve and restore our land and waters. That we will have increased the crop of our wildlife and fish and will have made great progress in restoring their natural habitat and increasing their supply of food so that we and they can live. It might be well to remember that beast as well as man must eat and in the final annalysis we both eat the same thing.

SITE OF FIRST SHIPYARD NOW WILDLIFE REFUGE

The first boat ever built in America was probably constructed in 1528 on what is now the St. Mark's National Wildlife Refuge off the Gulf coast of Florida, according to Dr. Vernon Lamme, Florida's State archeologist. Excavation of old Indian mounds led to the discovery of what was undoubtedly America's first shipyard, he told Fish and Wildlife Service representatives.

Accounts of a Spanish expedition early in the sixteenth century tell of the construction of the boat "caulked with palmetto oakum and tarred with pitch." The explorers' stirrups, spurs, crossbows, and other iron implements were converted into nails, saws, and hatchets, while their shirts provided the sails, and the tails and manes of horses were used to make ropes and tackles.

During the period of boat building, Indians attacked the party twice, killing 10 men, and more than 40 others died of sickness and hunger. By September 22, 1528, the Spaniards had eaten all the horses but one. They sailed the next day, each boat "so crowded we were unable to stir," the historian recounts.

CIGARETTES FOR MEASURING FISH

You can use cigarettes with which to measure your fish if you are ever in doubt as to whether one is legal and you are out in the middle of the lake without a rule. The length of any standard cigarette is 2 3/4 inches and that of the new "longies" 3 1/4 inches. Lay as many cigarettes end to end beside the fish in doubt and add the total. It may save you a fine.

WHAT CONSERVATION MEANS IN DOLLARS

BALAN

Prepared by

$217,590,000.00 is the estimated annual value and payroll produced by our State Parks and renewable

Financial Value	ASSETS	Value of Crop
$ 33,812,000.00	**Hunting and Fishing For Sport**	
	100,000 Dogs—bird, fox, rabbit, deer, etc., annual cost to own, $30 each	
	100,000 Hunters spend annually $100.00 each for guides, transportation, club dues, ammunition, supplies, etc.	
	Food value of ducks, rabbits, quail, deer, etc., averages $50.00 per hunter	$ 5,000,000.0
	25,000 Sport freshwater fishermen spend $100.00 annually on guides, tackle, transportation, pictures, etc.	
	They catch an average of 50 lbs. each at 25 cents	312,500.0
	300,000 Freshwater pole or hook and line fishermen (who pay no license) spend $10.00 annually on tackle and bait	
	They catch an average of 100 lbs. at 25 cents	7,500,000.0
	10,000 Deep sea sport fishermen spend $100.00 on tackle and supplies	
	Upkeep of yacht, also cost of crew, gas and oil	
	They catch 200 lbs. each at 25 cents	500,000.0
	Total Sportsmen value	$ 13,312,500.0
7,500,000.00	**Trapping**	
	Value of Pelts—Muskrat, mink, etc.	$ 6,000,000.0
	Traps, gas, oil, upkeep of ditches, supplies, etc.	
1,600,000.00	**Commercial Freshwater Fishing**	
	Buffalo, catfish, turtles, frogs, crayfish, etc.	1,500,000.0
	Cost of gas, boats, seines, etc.	
1,250,000.00	**Commercial Saltwater Fishing**	
	Speckled trout, mullet, sheepshead, drum, etc.	1,000,000.0
	Cost of boats, seines, gas, upkeep	
3,500,000.00	**Oysters**	
	Value and cost of harvesting	2,500,000.0
9,000,000.00	**Shrimp**	
	Value and cost of harvesting and canning, etc.	6,000,000.0
500,000.00	**Crabs**	
	Crop value	500,000.0
1,700,000.00	**Sand, Gravel, Shells**	
	(on lands of Department only)	1,500,000.0
156,500,000.00	**Forest and Lumber**	
	Employs more people than any other industry in our state	121,500,000.0
	Wildlife Reserves	
	Owned, Rockefeller, Marsh Island, Pass-a-loutre, etc., approximately 236,000 acres	
	Conservation Museum on Chartres Street, New Orleans	
	Actual count of visitors	
2,228,000.00	**State Parks**	
	Tchefuncte 1,000 acres (balance of land supervised by other divisions of Conservation Department), Chemin-a-haut 550 acres, Chicot 6,000 acres, Longfellow Evangeline 135 acres, Forts Pike and McComb 138 acres, Locust Grove 1 acre, Bogue Falaya 13 acres, Federal Funds, C.C.C., WPA $400,000, visitors spend $1,828,000.00	
$ 217,590,000.00		$ 153,812,000.0

The above data on Conservation in Louisiana has been presented in Balance Sheet form to impress
of conserving our lands and waters and thereby perpetuating our seafoods, wildlife, fish and forests
figures on forestry and the crop values of oysters, shrimp and fur are taken from the records. It
that may be possible. If our wildlife and fish resources are worth over $57,162,500.00 annually in th
Thousands of acres of muskrat, mink and duck lands could be made productive again; our commer
additional millions. There are no more frontiers in America to conquer. We must conserve and p
return to Louisiana they should find a land that has been conserved.

AND CENTS TO THE PEOPLE OF LOUISIANA

: SHEET

ed J. McCormac

atural resources—Forestry, Fish and Wildlife—Supervision is by the Louisiana Conservation Department.

Cost of Harvesting Crop	Number of People Involved
$ 3,000,000.00	100,000
10,000,000.00	100,000
2,500,000.00	25,000
3,000,000.00	300,000
1,000,000.00	10,000
1,000,000.00	
$ 20,500,000.00	
$ 1,500,000.00	10,000
100,000.00	25,000
250,000.00	10,000
1,000,000.00	10,000
3,000,000.00	15,000
200,000.00	3,000
35,000,000.00	40,000 (Employees)
	432,689
$ 2,228,000.00	307,000
$ 63,778,000.00	

LIABILITIES

No. 1

Game Hogs, both commercial and sport—yet our bag and creel limits are more liberal than any state.

Cheaters—Who will not buy sport and commercial licenses which are used to perpetuate your sport and business.

No. 2

Soil Erosion, Pollution and Forest Fires—200,000 acres of Louisiana top productive soil now rest at the bottom of the Gulf of Mexico—the land abandoned, you cannot raise crops on red clay and rocks.

Pollution—Our marshes, rivers and lakes have been polluted by foreign capital that leave nothing here for our children but waste and defaulted bonds. (Note: The pollution problem is changing fast, industry and state are cooperating now.)

Forest Fires—Thousands of acres are burned every year destroying trees, shrubs, etc., killing nesting birds, wildlife, fish—ashes and erosion kill fish. It is a criminal offense to burn other people's land and trees—but has any one been convicted—they have been caught.

No. 3

Law—No respect or enforcement of our conservation laws by **some** local courts. Thanks to those who are helping us, also to the Attorney General and his staff.

No. 4

Control—The Conservation Department has no control over the bag or creel limit, seasons, etc., regardless of whether some species of wildlife can stand another season of hunting, trapping or not.

No. 5

Politics—Some people are trying to defeat conservation here for purely political and selfish reasons, they are playing with dynamite. Conservation and politics will not mix. Smart national and state executives know that the conservation idea is covering America like a great quilt. That it affects the lives of over 50% of the voters, that the patronage is insignificant, probably 1½ jobs per county or parish. They turn the job over to able administrators and technicians and make friends, not enemies.

No. 6

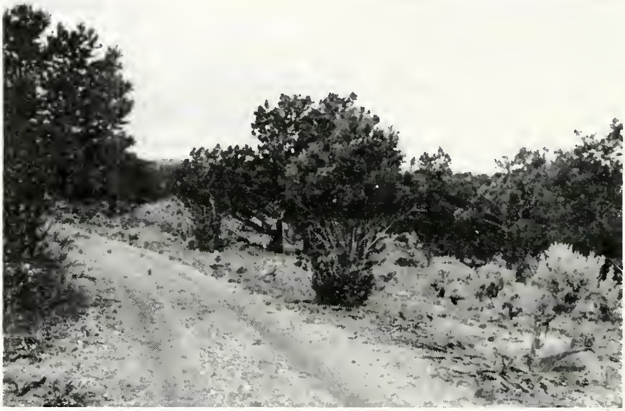
Capital and Surplus—If Louisiana should fail to take the opportunity now offered to conserve and restore her renewable resources in time, our capital surplus will be ——————NONE.

If we practice clean, decent, businesslike conservation our capital and surplus will be ....DOUBLED

e businessman, sportsman, trapper, shrimpers, oystermen, school teachers and others of the vital necessity
Many of the figures have been estimated and are very low, but we choose to be conservative. The
uld be interesting to have an accurate annual value of all, also a correct survey of our resources. In time
depleted state, think what they can be worth with proper administration and technical supervision.
al and sporting fresh water fishing opportunities are astounding; the tourist trade could be increased
petuate what we have. Our men and women are now preparing to defend our country, when they

Conservation and the Web of Life

by
Dr. Edward S. Hathaway*



■ Results of deer management in the Kaibab National Forest, August, 1938. The juniper in the center of the picture shows clearly the "deer line", below which all twigs were browsed away during the years when deer were too numerous. Progress in recovery, following the reduction in size of the deer Herd, is indicated by the new shoots at the base. The sage brush at the lower right, with its numerous dead branches and new shoots, shows the influence of the same factors.

(Photo by Jack E. Perkins)

I. WHAT IS THE "WEB OF LIFE"?

Many fishermen have learned that when carp multiply in a lake and destroy the vegetation, game fish become much fewer. Duck hunters know that when eel-grass died along the Atlantic seaboard, a lot of ducks lost their best food supply, and found it harder to survive. Cotton farmers know to their sorrow that a large crop of boll weevils means a small crop of cotton. In the same way, it may easily be shown that every plant and animal, directly or indirectly, influences many other living things, so that our whole plant and animal population makes up an organized system that may well be called "the web of life". A few more examples may help to make our meaning clear.

Not many years ago the governor of one of our southern states issued a rousing appeal to all quail hunters to join in a campaign against hawks. Said he: "The hawks are killing our quail; if we will get to work and destroy the hawks, then there will be enough quail for all of us." The governor apparently did not realize that one of the worst enemies of quail in his state is the cotton rat; seemingly he was unaware that hawks are of immense importance in holding down the numbers of cotton rats and that, where hawks have been killed, the rats have been known to destroy completely every new brood of quail.

Then there is the old question of the relations of hawks to chickens. Several years ago a farmer in New Jersey noticed a large red-shouldered hawk visiting his chicken yard at about the same time every day, and decided to kill the bird. An ornithologist of the Biological Survey told him that chickens were seldom found in the stomachs of red-shouldered hawks; but the farmer was unconvinced, so the two men agreed to lie in wait next day and see what would happen. In due time the hawk appeared, soared about overhead for a time, swept down among the chickens and rose with prey in its talons, but was promptly brought to the ground by a shot from the farmer's gun. Only then did the gunner discover that the claws of the dead marauder held not a chicken but a large brown rat. In full view of two witnesses the hawk had carried off one of the worst enemies of the poultryman—and his only reward was death!

Needless to say, one incident proves nothing, but the examination of hundreds of stomachs proves a great deal, and biologists have known for a long time that many species of hawks more than pay for any harm they do by the rodents and insects they destroy. This fact is gradually being recognized by the public, but old customs die slowly; it is much easier to shoot than it is to think; and when a man sees or thinks he sees a hawk carry off one of his chickens, it is easier to grab a gun than it is to stop and consider the probable value of the hawk as a destroyer of rodents and insects.

Perhaps these examples are enough to show what we mean by "the web of life". If we pull on one thread of a net, we pull indirectly on many more threads; if we help or harm any species of plant or animal we will, directly or indirectly, help or harm a vast number of other species. When one kind of animal becomes abundant, every species that it eats will suffer, but everything that feeds on it will have a rich supply of food so will also become more abundant. If a species becomes scarce, the animals or plants on which it feeds will have a better chance to survive, but those that depend on it for food must shift to something else or starve. These are only a few of the most simple and direct ways in which one species affects another. (An excellent way to get a bad headache is to try to figure out some of the indirect ways in which one kind of plant or animal influences another.) Small wonder, then, that ignorant tampering with the web of life often yields results very different from those that were intended; small wonder that when we undertake to combat a pest we often find, after the harm is done, that we have destroyed a useful servant.

II. WHAT HAPPENS WHEN WE TAMPER WITH THE WEB OF LIFE?

This is a large question because almost everything we do to the surface of the earth is sure to have far-reaching effects on the world of life. However some concrete examples may indicate the nature of the problems we encounter.

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"Clean Farming" vs. Quail

When the pioneers in the Mississippi Valley cleared away the forests, a growth of weeds and brush in the angles of their rail fences soon supplied ideal food and shelter for quail, so these birds increased considerably in numbers. However, with the passage of time, the zig-zag rail fences gave way to straight strands of wire; "clean farming" took weeds from the fence rows; and the quail population shrank, in some places almost to the point of extinction. No doubt overshooting was one of the causes of the decline, but no amount of protection from shooting can ever take the place of proper living conditions. The clean farms of the corn belt may produce splendid crops of grain, but they will never produce many quail unless a place is made for the plants that furnish food and shelter.

The Case of the Potato Beetle

About eighty years ago settlers on the Great Plains carried the culture of the Irish potato farther and farther west, until, in 1859, it reached the foothills of the Rocky Mountains. There a striped beetle that had been feeding on the wild sand bur found the new crop exactly suited to its needs. It multiplied tremendously and soon became famous (or infamous) as the Colorado Potato Beetle. Man himself had created the conditions that caused an unimportant and almost unknown insect to become a world-wide pest.

Farmers, Crows, and Ducks

During and after the World War agriculture pushed northward in Canada, until grain fields bordered on many of the important duck breeding marshes. With the grain went the crows, extending their range to the north as the grain became available for food. But every spring, while food was scarce, the hungry crows ranged far and wide over the marshes, taking heavy toll from the eggs in the early nests of ducks. A few weeks later, when vegetation hid the nests and when other food was more abundant, egg hunting was not so attractive or successful, but the effect on the early nests was serious. Thus, indirectly and quite unwittingly, the grain farmer has become an enemy of the ducks in the marshes that adjoin his fields.

Cougars and Deer in the Kaibab Forest

In northern Arizona, between the Utah line and the Grand Canyon, lies a wonderfully beautiful area known as the Kaibab National Forest. Covering about 1,100 square miles it now supports a population of about 17,000 mule deer. During the early years of the present century cougars as well as deer were numerous. President Theodore Roosevelt in 1906 made the forest a National Game Preserve and he himself was one of the leaders in killing out the cougars that were preying on the deer.

Within a few years the big cats were nearly exterminated and the deer became so amazingly numerous that people came from many miles around to witness the "deer spectacle." It is conservatively estimated that the deer population rose from 3,000 in 1906 to 26,000 in 1924. But signs of trouble began to appear. On the upland summer range the new aspen shoots were eaten almost as fast as they broke the soil. Farther down the slopes the oak saplings and the junipers were stripped of twigs as high as the deer could reach, so that every tree showed a sharp "deer line" below which hardly a twig could be found. At the still lower levels on the range to which the deer retire in winter, the sagebrush was dying out; robbed of its new growth every year it could not survive the heavy overbrowsing. Moreover the deer were in bad condition; many died every winter as a result of malnutrition, and it seemed that the whole deer population, eating itself out of house and home, was facing mass starvation. The guns that killed the cougars had backfired on the deer.

To head off disaster a conference of biologists and game experts was called, and these men agreed that the deer population had to be reduced. As a result the forest has been opened to a limited amount of hunting. A deer census is taken each year; range conditions are carefully watched, and the amount of hunting is regulated in an effort to maintain a deer population slightly below the carrying capacity of the range so as to permit recovery of the vegetation. The results to date have been highly gratifying. About 1,000 to 1,500 deer per season are taken by the hunters and the overbrowsed sage brush, junipers, and other range plants are making a good recovery. Cougars and other predators are controlled by hunting but are not exterminated, the purpose being to keep a moderate number of these carnivores in the forest to remove weak and defective deer from the herd. All in all, the present program of deer management in Kaibab Forest gives us a splendid example of how the web of life may be manipulated to make it serve the purposes of man.

Reports from South Africa indicate that a similar situation has existed in the Kruger National Park. This area is about as large as the State of Massachusetts. To increase the numbers of antelope and other large herbivores, the park authorities encouraged the killing out of lions and other carnivores. As a result the herbivores multiplied tremendously and soon had eaten up the grass so thoroughly that there was not enough sod to hold the soil, and great gullies began to appear everywhere. With the soil vanishing before their eyes, the park managers decided to stop persecuting the predators. The lions and other carnivores, with a vast food supply at

■ **Raven nests made of barbed wire typify the desolation in the Texas Panhandle resulting from the plowing up of the native grasses to plant grain. A few years earlier this area had been excellent cattle range. Breaking the sod allowed the soil to blow away in a few dry seasons.**

(Photo by the Soil Conservation Service)

hand, increased at a rapid rate and soon had reduced the numbers of herbivores to a point where the country could sustain them. Once more the grass began to cover the ground and soil erosion was checked. So it is literally true that the lions saved Kruger National Park.

Do we need more examples? They may be found on every hand! We break the sod of a cattle range to plant the land in grain—and the soil blows away in a few dry seasons. We irrigate the desert, raising superb crops of cotton and alfalfa—and also a crop of malaria mosquitoes to plague the inhabitants. We build a power dam, producing electricity to light our homes and do our work—and around the margins of the power-dam lake, malaria goes up by leaps and bounds, unless we hire a staff of sanitary workers along with the construction engineers. We drain a salt marsh, in an attempt to control mosquitoes, but sometimes find, to our sorrow, that we have increased rather than decreased mosquito breeding. (We were told about fifteen years ago that draining a salt marsh may kill the fishes and predatory insects, leaving a mosquito paradise in the temporary pools that the ditches cannot reach; but not enough people paid attention. A recent ill-starred drainage campaign in Delaware has afforded striking evidence to support this contention; however, that is too long a story to go into now.)

From all these experiences the conclusion is the same. The web of life is a complicated mesh, and breaking one strand in the mesh often produces startling and disastrous results. So, before we deliberately break any strands, it is a wise idea to get all the information we can as to what the consequences are apt to be.

III. A RATIONAL PROGRAM IN CONSERVATION

Sentimentality vs. Common Sense

When we talk about controlling animal life most of us are inclined to go to extremes, one way or another. Some years ago, in the city of Washington, there was a public lecture on the control of the house fly. When the speaker had finished, a nice old lady arose and, in a voice trembling with emotion, said, "In the name of the women of America, I protest against the wholesale murder of these defenseless creatures!" Probably not many pople would go quite as far as that in defending animal life! At the other extreme we find the "practical" individuals who are ready to start a campaign of destruction every time a heron eats a fingerling trout, or a hawk captures a quail. Between these two extremes we find all gradations of sentiment and prejudice, so the man who wants to know what is a rational policy in conservation may find it hard to draw the line between sentimentality and common sense.

Obviously there can be no simple formula for the solution of our problems, but there are two points on which most conservationists probably can agree: 1. When we create conditions in which an animal increases greatly at our expense, some form of control may become necessary. 2. When, in ignorance, we make attacks upon our supposed enemies, we often upset the balance of nature and do ourselves a greater injury than the one we seek to remedy. For this reason no campaign of destruction should ever be started until we have endeavored, as best we can, to estimate the total effects of the proposed campaign. Information now available from State departments of conservation and from the Fish and Wildlife Service of the Federal government will enable us to avoid a good many of the serious mistakes we otherwise might make.

The Outlook for the Future

One of the encouraging signs of the times is the recent increase in amount of wildlife research being done. Many animals are being studied to determine what influence they exert on the balance of nature. Several bulletins have appeared recently suggesting methods for preventing harmful activity of birds and mammals without destroying the offenders, and it is to be hoped that such work will be pushed much farther, since many useful animals will, on occasion, make themselves a nuisance to special interests. We have only scratched the surface of what we need to know if we are to get the maximum benefits from our plant and animal resources, and a basic need in wildlife management is to increase the amount and improve the quality of research on the web of life.

Nevertheless, research alone cannot save us from the pitfalls that beset the path of the would-be conservationist, since many of our worst mistakes result from our failure to make use of the knowledge that is already available. The governor who wanted to kill the hawks may have believed fully in the validity of his program, but he was playing a hunch, not utilizing scientific knowledge; and many another sincere proposal has been put forward in the name of conservation, but without adequate consideration of the accumulated research and dearly bought experience of the past.

It is a difficult and dangerous thing to attempt to summarize in a few words the general trends of thought in any large field, but one who watches carefully the current developments in the field of conservation is apt to be impressed by the trend toward simplicity and naturalness in the handling of wildlife problems. Just as the doctors today give less medicine than they gave a generation ago, but put more faith in good nursing, and in giving Nature a chance to effect a cure, so, among workers in wildlife management, we find less faith in the importation of species and in artificial cultural practices than we found a few years ago; instead, we find a greater interest in making a few simple adjustments in the web of life, with a view to helping Nature a little and leaving the rest of the job to her.

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BIRDS THREATENED WITH EXTINCTION

There are at least ten birds in the United States which are threatened with the possibility of extinction unless the public, and especially the sportsmen, aid in preserving them. These birds are the bald eagle, Ross' goose, greater snow goose, California condor, sage grouse, Attwater's prairie chicken, and four species of kites: the whitetail, Everglades, Mississippi and swallowtail. According to Harry Livingston, well known nature artist who pictures these birds in the current issue of National Sportsman magazine, all are fully protected by law, but unless the laws are enforced and their habitats preserved they may follow the heath hen, which became totally extinct in 1932, when the last survivor died on Martha's Vineyard, Mass.

Arthur J. Naquin, New Orleans, La.

"In my opinion, the Louisiana Conservation Review is a very worthwhile publication. It is well edited, the articles published are interesting as well as authoritative. It is my hope that every school child of proper age in Louisiana is required to read and make use of the publication."

CABINET WOODS OF LOUISIANA

by
Earline Hester Harper

Proud Possessors of real Louisiana antiques might examine their treasures anew and find a lost link with the past. It is possible that some piece which has been carelessly called mahogany for years is of another wood, and one which connects it much more intimately with the history of this section.

In **The Encyclopaedia of Geography** (Murray) published in 1836 it is noted that before mahogany was commonly imported to the North American colonies the native red bay of the south was used as a substitute. Though mahogany appears in English customs records as an import as early as 1699 it is probable that a long period elapsed before it was available in any great amount to colonial cabinetmakers. The rose-colored wood of the Louisiana red bay (**Persea Borbonia** Spreng.) is hard, heavy and close-grained. With the patina of age, like the wood of the black birch of the north, it takes on more and more the appearance of mahogany.

CYPRESS WAS USED BY PIONEERS IN BUILDING FURNITURE

Though red bay is still in use by cabinetmakers when obtainable, it is rare, having been cut extensively in the old days for boat-building.

Bay is not the first of the native woods used by Louisiana furniture-makers. In the oldest records the material mentioned for the purpose was the same as that used for building material—cypress. Cypress was not only plentiful and close at hand for the early colonists but its wood was soft and light, free of resin ducts and easily worked. To these virtues it added that of an amazing durability in use both outdoors and in. Light red when newly cut, it aged to brown and unvarnished surfaces were waxy and pleasant to the touch. Except for the meager supply brought from France or bought in the north it is likely that a great part of the furniture used in colonial Louisiana was made of cypress. An inventory of the furniture of a wealthy planter of Natchitoches Parish, made in 1816, lists no less than eleven beds of cypress as against only two of mahogany and cherry, besides tables, bureaus, etc. of the same material. And though the cypress furniture of Louisiana was locally made it would be incorrect to assume that it was inferior either in design or construction; on the contrary many pieces exist which are of excellent design and careful execution, some showing skilful carving and other detail.

■ **Louisiana has twenty different oaks.**

Cypress is no longer listed as a cabinet wood though it is doubtless occasionally used and is much in demand for other purposes on account of its extreme durability when exposed to weather or in contact with the soil.

NATIVE BLACK WALNUT WAS ALSO POPULAR IN OLD DAYS

Colonists, familiar with the European oaks, naturally made use of the American oaks for furniture-making though they considered even the white oak inferior in some ways to the European varieties. It was only the live oak which was judged in no way inferior to the European oak and though it was never in use for furniture it was in such demand as a shipbuilding material that a hundred years ago it was in danger of being exterminated.

Another wood which appealed as an old friend to colonial cabinetmakers was the native black walnut. The Persian walnut of Europe (commercially known as Circassian) had been in use for furniture since ancient times and the American member of the family had all the good qualities of the European and an even greater richness of color. This finest of North American cabinet woods came early into its own and many of the best examples of American-made antique furniture are of walnut. The abundant supply encouraged its use for building and interior finish and many fine old buildings have walnut paneling, stair-rails, etc.

One of the most beautiful and valuable woods growing in the Louisiana forests and one which found early favor here as in the Atlantic seaboard colonies was the wild cherry, or black cherry. The red-brown wood is hard, close-grained, takes a high polish and is beautiful both in grain and in color. Though there was a not inconsiderable supply of native trees little of the cherry furniture made in early Louisiana was from the native-grown trees. The furniture-makers of New Orleans were able to easily obtain quantities of this wood after the opening of the flat-boat traffic from up river. Kentuckians cut the trees which grew to a large size along the Ohio valley and used the lumber in constructing the crude boats on which they rode the river current to New Orleans. There they sold the wood. In old records it is often mentioned as the material of which furniture is made, frequently in combination with mahogany imported from the West Indies. Wild cherry trees which grow near streams seem to have a particular beauty of grain and color rivalling mahogany in richness.

FOUR OF TWENTY OAKS FOUND SUITABLE FOR USE

The Louisiana woods furnished the early settlers with other good cabinet material—the light reddish-brown of maple (red maple), rosy, aromatic cedar, the blonde wood of holly. Of the twenty oaks which grow in the state at least four were found highly satisfactory, with the white oak taking first honors. Many humbler woods were used by the itinerant furniture-makers who went about the south from plantation to plantation making articles for the planters and using therefor whatever wood was at hand that had been felled long enough to be seasoned. There is at least one case on record in which a China tree which had been blown down by the wind was utilized. Semi-skilled slaves who made the humbler articles, kitchen furniture and furniture for the quarters, often used hickory. Its durability is attested by the existence of many very old ladder-back chairs.

With the passing of years and a growing scarcity of the finer cabinet woods many trees whose lumber was not esteemed for any purpose a hundred or even fifty years ago have become commercially important as cabinet woods. Even the humble sycamore when quarter-sawed yields a rippled grained lumber which has gained favor. The sand-bar willow which grows along our larger rivers is in demand, the dark heart-wood has an appearance not unlike black walnut and is used for veneer. Woods which lack strength or weight are used as veneer upon a base of stronger or heavier wood; those which lack color but have beauty of grain may have the deficiency supplied by dyes or stains.

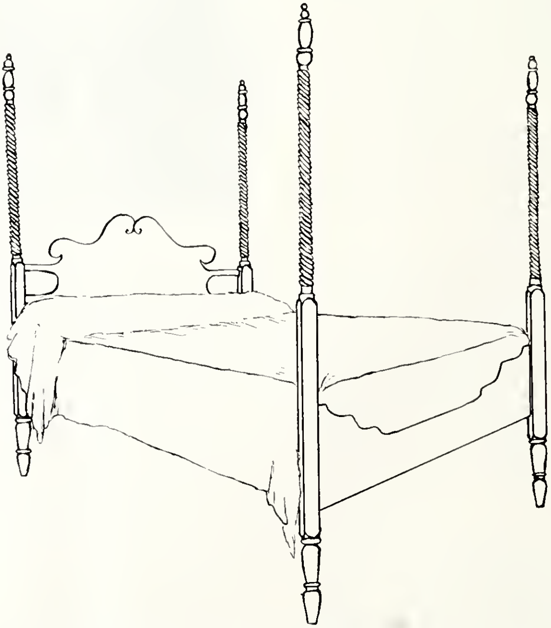
Sweet gum (red gum), formerly little used, is now in demand and its many virtues as a cabinet wood are being recognized. The wood is hard, strong, stiff, easily worked, close-grained, bright brown tinged with red. The heart wood has attractive figure and a satiny luster and few other woods equal it in beauty of grain. Stained, it is often sold as Circassian walnut.

FOREST FIRE IS ENEMY OF OUR CABINET WOOD

Of the native trees of Louisiana twenty-five or more are used in the manufacture of furniture and for interior trim. Besides those already mentioned are beech, of which cheap furniture is made; cottonwood, whose commercial name is black poplar; hackberry; bois d'arc, used by local chair factories but might possibly achieve some poularity as inlay on account of its unusual color—bright yellow—if it were possible to fix that color; magonlia, which is creamy white but, like the bois d'arc, turns brown on exposure; tulip tree; linden, called basswood; white ash; catalpa and probably others.

The arch enemy of the cabinet woods is the same as that of all our forests—fire, though indiscriminate and wasteful cutting is also to be blamed for the growing scarcity. Some of them, attractive in spring or summer bloom, in autumn color or winter foliage, have not escaped those who go forth to the woods innocently rejoicing in nature and leave behind them torn branches, shredded bark and uprooted young trees.

It is regrettable that replenishing of the cabinet woods should have been left so largely to chance. Almost all of them can be satisfactorily transplanted and many grow readily from planted seed, and though some are slow-growing they need nothing but protection and all are ornamental enough to be worth the space they occupy without consideration of their commercial value. No farmstead or strip of timber land is so valuable but its worth could be greatly enhanced in a few years by a little judicious planting of hardwoods, and as much may be said in their favor for highway planting. Growing of these trees deserves special attention in the Gulf states because our long warm season is favorable to their quick growth.



■ **The cypress furniture of Louisiana was inferior neither in design nor execution. Louisana cypress bed (*circa* 1800).**

VARIOUS CABINET WOODS IN STATE ARE DESCRIBED

The best of the cabinet woods, walnut, cherry, red bay, white oak, sweet gum and holly, recommend themselves especially by what might be called their extracommercial merits.

The black walnut grows readily from the planted nuts and though it does not reach what is considered full maturity for upward of seventy years within a few years after planting it is a handsome tree and begins bearing its richly-flavored nuts. There seems to be a divided opinion about one of its virtues as a shade tree—one botanist writes that its acid bark and nut hulls tend to prevent the growth of grass and small plants underneath its branches while another blandly opines that it should be planted as a lawn tree since the comparative scarcity of its foliage permits grass to grow readily in its shade. Take your choice, but the black walnut tree is well worth planting and should find a place on every Louisiana farm and is not objectionable in city yards where there is room. Almost no large trees are now to be found; those remaining at the time of the World War were cut to supply the demand for walnut to be used in making airplane propellers. As an example of the growth attained by the walnut tree, supported by known dates: a specimen grew from a nut brought by a pioneer family from one of the Atlantic seaboard states in 1854 and planted in the Ouachita River region and when it was cut in 1917 its trunk measured a little more than four feet in diameter.

The wild cherry deserves wide planting. It is equally suitable on farms or in the city, grows readily from seed or is easily transplanted and in favorable locations grows rapidly. A seedling tree that has ordinary protection will grow to a height of from forty to sixty feet in less than ten years, makes a shapely, graceful tree, attractive in winter with its smooth, varied gray bark and slender branches. In summer the foliage is bright, glossy green and when the dark red, almost black, fruit ripens early in the season it is extremely enticing to birds so that all day there is a riot of wings in its branches. Those who love birds should plant it as a lure. In autumn the leaves turn a soft yellow touched with orange. In some localities the tree is called "rum tree" in memory of its contribution to the hilarity of old time festivities in the form of cherry-bounce.

The red bay, though not a large tree, grows readily, is evergreen and very ornamental. It occurs naturally in rich, moist soils but will grow well in other situations. It furnishes the bay leaf used in cookery. It seems to grow especially well in the southern part of the state.

■ **Hardwoods growing with evergreens; snow (rare in Louisiana) accenting the contrasting beauty of line.**

The white oak, beautiful in winter with its silvery gray, shaggy bark and rugged limb structure, in spring with its delicate pink, velvety leaves, in summer with its bright foliage above the pale-colored trunk and in its autumn dress of rust red, swings round the calendar in a cycle of beauty. Trees grown for timber, as is true of most trees, produce longer, cleaner trunks when grown in the forest. In the open they assume a spreading form with shorter, thicker trunk.

The sweet gum is easily grown and with its silvery bark, its odd burs, its star-shaped leaves which show such gorgeous variety of color ranging from palest yellow through all shades of orange and red to maroon and even purple in autumn, is easily one of our most beautiful trees.

The holly, while hard to transplant, when once established is hardy and so attractive that it deserves wide planting, especially as it seems in real danger of extermination on account of its popularity as a Christmas green. Its bright scarlet berries are relished by birds.

Though furniture is now made of many other materials than wood it seems unlikely that wood will ever have a real or long-lasting rival because of its adaptability and its depth, warmth and richness of color. An awakening to the beauty and value of the hardwoods would add to the future wealth of the state.

NEW LIST OF WILDLIFE ORGANIZATIONS READY

There are 278 Federal, national, international, and State organizations concerned with the protection of wildlife in North America, according to a publication recently issued by the United States Department of the Interior.

Prepared by the Fish and Wildlife Service and distributed as Wildlife Circular 10, entitled "Officials and Organizations Concerned With Wildlife Protection: 1940," the compilation shows that wildlife conservation holds the attention of at least 10 Federal agencies, 44 national and international organizations, 190 State bodies, 6 Canadian agencies and organizations, 24 Provincial groups, and 2 agencies each in Newfoundland and Mexico.

Louisiana's Picturesque Wildlife Names

by
James Nelson Gowanloch*

Louisiana, for naturalist and scientist, is one of the most critically important key states in the entire Union. Abounding in wildlife from the Arctic-born geese that winter here, to the tropical fishes that find their way northward into the Gulf of Mexico; exhibiting a terrain where one may observe, side by side, the ordinarily desert loving prickly pear, *Opuntia*, and that water loving native palm, the Palmetto, *Sebal;* where eastward wandering western forms like the Fulvous Tree-duck, *Dendrocygna bicolor helva* Wetmore & Peters, meet with such westward wandering eastern forms as the Reddish Egret, *Dichromanassa rufescens rufescens* Gmel., Louisiana is virtually the wildlife crossroads of a continent.

Perhaps nowhere in the world do there exist more picturesque names for wildlife than in Louisiana. This doubtless is in large part due to the peculiar backgrounds of the early inhabitants of the State who from the earliest French adventurers and hunters faced the hardships of an unusual wilderness from which they sturdily won their sustenance. Someone once said that an Indian's idea of a road was a means of getting from one place to another and arriving there alive. This would have well applied to primitive Louisiana roads were it not for the fact that the rich network of waterways provided for the bateau and pirogue of traveler and hunter a highway paved with water by which he could pass through the wilderness, a wilderness, seemingly interminable, seemingly unconquerable.

It is the purpose of this brief discussion to set down some of the odd and colorful names that have been lavished by early Louisianians upon the living things, among which they won their way of life

First of all it is necessary perhaps to explain for those outside of Louisiana that Louisiana-French is a peculiar dialect differing greatly in many of its elements from both the Standard French of Europe and likewise from the modified *patois* of the French Canadians. Two common terms probably require some brief explanation. *Cajun*, the term applied to many Louisianians though with no derogatory connotation, is a corruption of *Acadien* m., and has its origin in the contribution that the French Acadians after their expulsion from Nova Scotia made in the 1760's to the colonization of the State. *Creole*, probably of all Louisiana words most misunderstood outside of the State, is correctly applied only to the white descendents of the French or Spanish settlers in Louisiana during the colonial period, 1699-1803.

Many years ago, 1758 to be exact, an alert European Frenchman, Antoine S. Le Page Du Pratz, published in Paris three volumes entitled *"Histoire de la Louisiane"* in which he recounted most entertainingly intelligent observations made during extensive travels through the vast territory that was then Louisiana. This volume tells with surprising accuracy of the plants, of the birds, of the fishes and of the mammals that he found in this strange land. Some of his illustrations, however, are astounding, fantastic, impossible; a state of affairs readily explicable when it is remembered that his artist living in Paris, never once gazed upon any part of Louisiana or upon its animals so thus had a free rein for his imagination.

One of the most fascinating books that can fall into the hands of any Louisianian is "Louisiana-French", (1937) by Dr. William A. Read, Professor of English Language and Literature in the Louisiana State University. It is from this rich store of brilliant erudition that much of the material herein presented is derived. Read's studies have taken their place among the most instructive analyses of any North American dialect. Supplemental is his subsequent paper "Some Louisiana-French Words," (1937). Dr. Read's additional papers on the origin of place names in the Deep South are also of great interest but lie in character beyond the purview of the present paper.

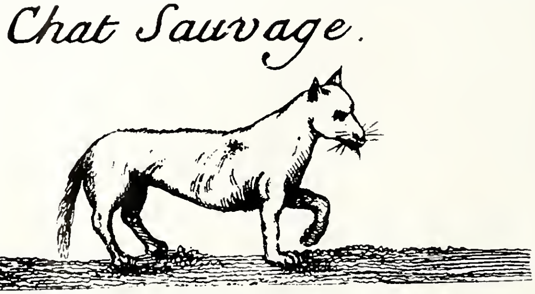
It is difficult to project ourselves back into that earliest Louisiana of white men who fought with inadquate instruments the fury of the elements (without grace of Weather Bureau prediction), the ravages of malaria, cholera and of yellow fever, yet won from this wilderness a strange and never to be repeated flowering of weath that expressed itself in the importation from abroad of dancing masters, distinguished artists and the elaborate etiquette of the duelling field that left engraved upon many a tombstone the often too tragic distinction "Died on the field of honor."

SEVEN LANGUAGES CONTRIBUTE

All of these remarks may seem extraneous to the subject of Louisiana wildlife dialect yet they serve in part to convey to mind the background of a past that bore some of the most descriptive and picturesque terms ever applied to wildlife in any land. As Read has well pointed out, Louisiana-French is extraordinarily complex since it is derived from seven distinct languages; namely, Standard French, the Indian tongues, German, English, the African languages, Spanish and Italian.

It is hard to choose among the many colorful words that the early hunter applied to the animals that served as meat for his table, and to the plants from which he gained food or shelter. Even to the dishes composed from these foods he gave distinctive names that have long since taken permanent place in the language of Creole cookery.

Two of the many factors contributing to the confusion of Louisiana-French


Chat Sauvage.

(After Le Page Du Pratz, 1758.)

■ *Chat Sauvage*, **literally "wildcat", was not a wildcat at all but our mischievious and engaging friend, the raccoon, here quite unidentifiable. The artist has even omitted the 'coon's black domino that gives to this species such a quizzical expression.**

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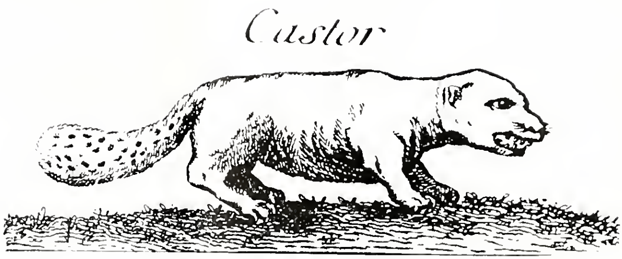
* Chief Biologist, Department of Conservation.



(After Le Page Du Pratz, 1758.)

■ **The beaver, large in head, sour in expression and weird in tail, is not recognizable as the industrious animal that even today inhabits the Florida Parishes of Louisiana.**

names for wildlife are: First: The early French hunters and explorers often erroneously thought that they beheld in this new continent the mammals, birds, reptiles and fishes of the Old World. Whole biological groups which had no members in the New World were recalled by the fauna of the western hemisphere and received popular names of Europan forms with which they had no taxonomic relationship.

Second: The French settlers along coastal Louisiana fished in waters where just as do our fishermen of today, they found in the same area fresh water fish one day, salt water fish the next. Louisiana has only one tidal cycle instead of two, as almost everywhere else in the world. The tidal amplitude is low, so that wind activated tides often modified, obliterated, or even reversed the state of the normal lunar and solar tides. Salt water in the morning, fresh water in the afternoon became the difficult to interpret picture, so that the fishermen, without being the least bit worried by such major inaccuracies cheerfully gave names of fresh water fish to salt water species, names of salt water forms to fish never found in salt water.

There follows now a selection of certain Louisiana names for wildlife. These names have been quite arbitrarily chosen as examples of the peculiarities of this picturesque speech and are arbitrarily arranged in no alphabetic or taxonomic order, but are included because for one reason or another they illustrate the sometimes keenly observant, sometimes fanciful, sometimes whimsical fashion in which the early Louisianian named with his own name the objects that he beheld.

THE BULLFROG NAMES HIMSELF

The Bullfrog, notable delicacy of the Louisiana gourmet, became to the early French *Ouaouaron*, m., a word long ago cited by Lafcadio Hearn as a perfect example of onomatopoeia. The origin of this term has been traced to the Huron *Ouraon* and the Iroquois *Wararon*, imitative of the frogs' cry and brought by the French of Canada to Louisiana. The Bullfrog, *Rana catesbeiana* Shaw, and the Southern Bullfrog, *Rana grylio* Stejneger, both occur in Louisiana.

The bat, attracting so much attention because of peculiar structure and habits, is known in standard French as *Chauve-souris*, "baldheaded mouse". Louisiana-French confers on this odd animal an even odder name *Souris-chaude*, f., "hot mouse". Some scholars surmise that French-Canadian woodcutters gave this name because bats slept the cold Canadian winter through in hollow trees. The most acceptable interpretation of this substitute term is that after *Chauve-souris* became reversed to *Souris-chauve* and significance of this compound became forgotten, *chaude* was substituted for *chauve*. Nine different species of bats occur in Louisiana.

The deerflies that pestered Louisiana's earliest settlers received from them the vivid, indignant and emphatic name *Frappe d'abord*, m., "strike first". Dr. Read believed that this term was brought to Louisiana by Nova Scotian Acadians, but another friend of mine discovered the use of this name in a letter from New Orleans dated October 27, 1727, a letter written by a French nun making her first perilous journey into the vast Louisiana territory of that day, long before the advent of the "Cajuns".

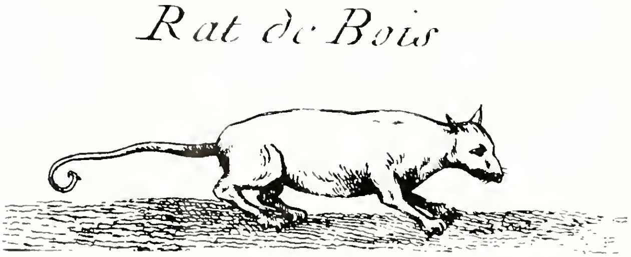
The skunk, or polecat, *Mephitis mesomelas mesomelas* Lichenstein, notorious North American, is known as *Bête puante*, f., "stinking beast" and *Chat puant*, m., "stinking cat". Six other Louisiana parishes gave it the more vivid name of *Arrosoir*, m., "sprinkler" or "watering can".

WHAT FISH IS THAT?

Fishes provide many peculiar Louisiana names. The Bowfin of the books, *Amia calva* L., becomes the *Choupique* m., to both French and English speaking Louisianians. Indeed there is a town in Vermilion Parish bearing this name. *Tchoupic*. The writer has personally corroborated instances in which at least a score of these hardy fish were plowed up in one Louisiana field already dry enough for cultivation.

Poisson armé is the name well given to the four species of Louisiana Gars whose hard ganoid scales gave them excellent armor plate. The four species and their technical designations follow: The Choctaw Indians, according to Read, called the Gar *Nani kallo*, or *Nani kamassa* "strong fish", a well earned designation. The Indians used the bone like central structures of the scales for arrow points, structures remarkable in that they required actually no working down, since they already approximated the shape of the Indian stone arrowhead. Mississippi Alligator Gar *Lepisosteus spathula* Lacépede, Spotted Gar, *Lepisosteus productus* (Cope), Short-nosed Gar, *Lepisosteus platostomus* Raf., and Needlenose Gar, *Lepisosteus osseus* (L.)

The White Crappie, *Pomoxis annularis* Raf., known in North Louisiana incorrectly as the White Perch, was first believed to have received its name *Sac à lait*, m., "milk bag" because of the silvery olive appearance of the fish, or because of its extraordinarily white flesh. Read's further investigations, however, revealed that the Choctaw Indian *Sakli*, "trout", is the real source of the name. This is an example of a philological phenomenon known as attraction,



(After Le Page Du Pratz, 1758.)

■ *Rat de Bois* **presents an appearance just as unhappy as do the other animals illustrated in the interesting and historically valuable work of Le Page Du Pratz. The relationships of the opossum were misunderstood by the early naturalists.**

(After Le Page Du Pratz, 1758.)

■ **The skunk, drawn by an artist who had obviously never beheld one. Note that he makes the stripes run around the body instead of lengthwise.**

whereby a word in one language, meaningless in another language bears yet a phonetic resemblance to a meaningful word in that language. Here, however, the French word resembling the Indian word can, by some use of the imagination, be applied with some fancied descriptive value in French.

Pompano, m., arose through the Spanish from the Latin *Pampenus*, "vine tendril", a name that is somewhat obscurely interpreted as referring to the external color of this delectable fish. The Common Pompano, *Trachinotus carolinus* (L.) is regarded by manv as the supreme marine delicacy. Several closely related inferior species, to which the Spanish name of *Permit* is given, are sometimes sold as true Pompano.

The freshwater Alligator Snapping Turtle, *Macrochelys temminckii* (Holbrook), received the name *Caouane*, f., a word whose origin seems quite obscure. It is heard generally throughout Louisiana in English in the modified form of Cowan.

The Large-mouthed Black Bass, *Huro floridana* (Le Sueur), became *Truite verte*, f., although not a trout at all but a Sunfish. "Green Trout" is its almost universal English name in Louisiana.

FOOT SOLDIERS OF THE MUD FLATS

Touloulou and *Tourloulou*, m., a corruption from the French *Tourlourou*, m., "foot soldier" is the naive Louisiana name for Fiddler crab, genus *Uca*, two species of which occur along the Louisiana coasts. Everyone who has observed the singular marching forth and back performed by the armies of these crustacea will appreciate the aptness of the name.

Only freshwater member of the Croaker family, the Freshwater Drum, *Aplodinotus grunniens*, Raf., is now known in English throughout Louisiana as the *Gaspergou*, a name corrupted from Casburgot or Casseburgau, m., "shell cracker". DuPratz said of it: "An excellent fish . . . its body . . . round, with gilded scales; in its mouth it has two bones shaped like a file with which it crushes shell called *burgo*, a fact which has given rise to its name."

Spatule, f., "spoonlike" is used to describe both a bird and a fish. The bird is the spectacular Roseate Spoonbill, *Ajaia ajaja* (L.). Roseate Spoonbills still survive in small colonies in some southwestern Louisiana parishes. The fish is the Paddlefish, *Polyodon spatula* (Walbaum), known generally in English in Louisiana as the Spoonbill Cat, although it is not a catfish at all. Its flesh delicious and valuable, the Paddlefish also provides roe out of which can be very simply manufactured what connoisseurs pronounce the finest caviar in the world.

Barbue, f., "bearded", is applied to the Catfish because of its whisker-like barbels. Four species of large commercial Catfish exist in Louisiana: Channel Cat, *Ictalurus punctalus* (Raf.), Yellow Cat, *Opladelus olivaris* (Raf.), Blue Cat, *Ictalurus furcatus* (C. and V.) and Eel Cat, *Ictolurus anguilla*, Evermann and Kendall. The name *Barbue* is derived from the European-French name for a small European member of the Carp family, *Gobio fluviatilus* Cuvier.

Yaupon, attractive relative of the Holly, was *Cassiner*, m., of the early French, its name derived from *cassine*, f., applied by a Timucuan Indian tribe of Florida to the strong beverage made of its berries. Technically known as *Ilex vomitoria* Ait., Yaupon provided this famous festive and ceremonial drink held in high value by the early Indian tribes.

Shrimp, because of their backward leaps when alarmed, were termed *Chevrette*, f., "kid". One species of shrimp, *Penaeus setiferus* (L.) contributes almost entirely the Louisiana commercial sea shrimp production which composes one half of the total shrimp yield in the United States.

The Lubber Grasshopper, *Dictyophorus reticulatus* Thurberg, seemed to suggest to the early Acadians in its head the head of a horse and became *Sauterelle cheval*, f.

Pirogue, the universal Louisiana word for a dugout was and is also applied loosely to small boats which are not dugouts. The name comes from the Carib dialect of the West Indies through Spanish and standard French into Louisiana-French.

The fruit of the persimmon tree becomes in Louisiana-French *Plaquemine*, f., and gives name to a Louisiana parish, Plaquemines, and a Louisiana town in another parish, Plaquemine.

BIRD BEAKS BECOME BIRD NAMES

Bird beaks give rise to many odd names. *Bec-en-ciseaux*, m., "scissors bill" well depicts the Black Skimmer, *Rynchops nigra nigra* (L.), whose lower mandible, exceeding in length the upper mandible, is used by the bird for feeding by skimming the surface of the water.

Bec-scie, m., "saw-bill" is the American Merganser, *Mergus merganser americanus* Cassin.

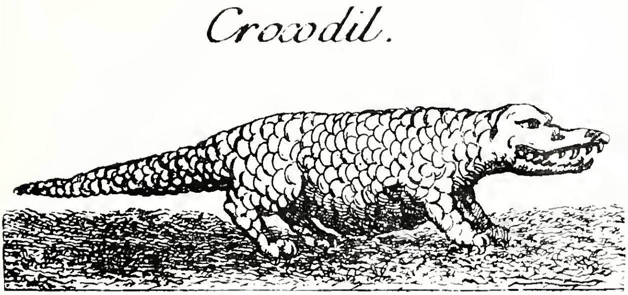
Bec-scie du lac, "lake saw-bill" or *Bec-scie de Cyprière*, "cypress swamp saw-bill" is the Hooded Merganser, *Lophodytes cucullatus* (L).

Bec-scie de Mer, "sea saw-bill" is the Red-breasted Merganser, *Mergus serrator* L.

Bec-croche, m., "crooked bill" is the White Ibis, *Guara alba* (L.), a species subsisting largely on crayfish, which it catches effectively by means of this crooked bill structure. The Eastern Glossy Ibis, *Plegadis salcinellus salcinellus* (L.) and the White-faced Glossy Ibis, *Plegadis guarauna* (L.) also both receive this name.

Bec-de-hache, m., "hatchet bill" is that extraordinary bird, the oystercatcher, *Haematopus polliatus polliatus*, Temminck, a species that nests in appropriate regions of the Louisiana coast. Powerful and thin edged, its bill is the instrument by which it smashes into partially opened oysters, one element of its food.

The Cedar Waxwing, *Bombycilla cedrorum*, Vieillot, a winter visitor with Louisianians, social, trim and polite, is



(After Le Page Du Pratz, 1758.)

This fearsome creature was the artist's conception of the Louisiana alligator.

remarkable for the fact that its inner primaries and sometimes tailfeathers are tipped with horny, red droplike masses that look like sealing wax. From this came the name *Cirier*, m., "waxmaker".

The Redhead, *Nyroca americana* (Eyton), because of the whistling of its wings, was given the name of *Violon*, "violin".

Many birds likewise received names because of distinctive cries. The Western Willet *Catoptrophorus semipalmatus inornatus* (Brewster) became *Vire-vire*, a double imperative from the French, "to turn about".

Pique-bois doré, "golden woodpecker" is the Flicker or Yellow Hammer, *Colaptes auratus auratus* (L.).

Pigeon was applied as *Pigeon ramier*, *Ectopistes migratorius* (L.) to the Passenger Pigeon, a bird now extinct.

Pigeon de mer, "Sea Pigeon" is the Cabot Tern, *Thalasseus sandvicensis acuflavidus* (Cabot). When *queue à ciseaux*, "forked tail" or "scissors tail" is added the bird is Forster Tern, *Sterna forsteri* Nuttall.

Our Killdeer, *Oxyechus vociferus vociferus* (L.) becomes well named *Piaillard*, m., "squaller", earned by its loud and noisy cry.

CHURCH NAMES FOR BIRDS

Ecclesiastical terms also play their part. The Painted Bunting, one of the most strikingly colored of all North American birds, becomes *Pape*, "pope", which became corrupted into the common Louisiana English usage, Pop, a name confusing to those unfamiliar with its origin. *Evêque*, "Bishop", was the title bestowed upon the Indigo Bunting, *Passerina cyania* (L.), and Cardinal upon *Richmondena cardinalis magnirostris* (Bangs), the familiar bird known in English by the same name. Even Read, after careful investigation, has been unable to establish clearly the reason why the name *Pape*, m., was given to the Nonpareil Bunting, *Passerina ciris* (L.) commonly Pop in Louisiana English speech. Familiarly throughout Louisiana in English the term Pop is applied to the Nonpareil, as already stated, the term Blue Pop to the Indigo Bunting. Until the enforcement of restrictionary laws, both Nonpareils and Indigo Buntings were trapped in great numbers in Louisiana for shipment throughout the United States as cage birds, a practice which has now been virtually and justly stamped out.

The Bob-white, *Colinus virginianus virginianus* (L.), received the names of *Perdreau*, m., and *Perdrix*, f., "partridge", although it is very different from the European partridge.

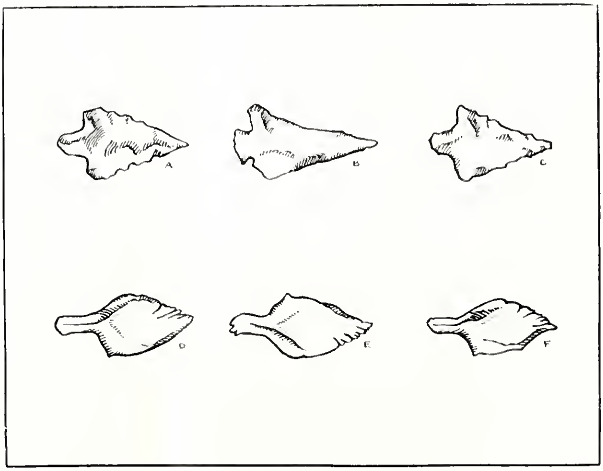
Paille-en-queue, "straw-in-its-tail", is the Pintail Duck, *Dafila acuta tzitzihóa* (Vieillot), known commonly throughout much of the United States as the Sprig or Pintail.

The Upland Plover, *Bartramia longicauda* (Bechst.), is the *Papabot(t)e*, m., a name imitative of its characteristic cry. Now enjoying complete State and Federal protection throughout the year, the Upland Plover was once one of our Louisiana game birds most highly prized for the Creole table.

The Bobolink, whose jingling and full throated song adds so much to the charm of the northern prairies, received in Louisiana the name of *Ortolan*, m., "nightingale", although the Bobolink, *Dolichonyz oryzivorus*, (L.), as a matter of fact, belongs with the Meadowlarks, Blackbirds, Cowbirds, and Orioles, to the bird family, *Icteridae*, confined in its distribution entirely to the New World. Bobolinks, also known in Louisiana as Rice Birds, are far from seen at their best here, since not only do they destroy considerable rice, but also during their wintering here they fail, naturally, to display the amiable characteristics of song that mark them during the northern breeding season.

The Scissor-tailed Flycatcher, *Muscivora forficata* (Gmel.), received the light and gay name of *Osieau papillon*, m., "butterfly bird". Its range extends into the western areas of Louisiana and it has been taken as far eastward as Grand Isle.

Prie-dieu, m., "pray God", the Louisiana-French name for the Carolina Wren, *Thryothorus ludovicianus ludovicanus* (Latham) in certain parishes of the State, has a still obscure significance.



A, B and C are Indian stone arrow points recovered from Louisiana village sites. D, E and F are the bone-like structures underlying the external scales of the gar. These specimens were chosen by the writer to illustrate how exactly they match the appearance of the Indian arrow points. These gar scales were actually used by Louisiana Indians since they could be bound to the arrow shafts and put into use without any working over of them being necessary.

Poule-d'Eau, f., is used by the French and English Louisianians for the Coot, or Mudhen, *Fulica americana, americana Gmelin.* The English pronunciation used in Louisiana is "pull doo".

Louisiana's only breeding Grebe, the Pied-billed Grebe, *Podilymbus podiceps podiceps* (L.), receives as well as its name *Plongeur,* m., "diver" the more colorful designation of *Sac à Plomb,* m., "bag of lead" because it can dive so swiftly and *Macruse,* f., brought from the Dutch *Meerkol,* "water hen" through the Norman French *Macroule,* f. It has gained many other designations because of its peculiar mannerisms. The name, Didipper, is often used in Louisiana instead of Didapper, by which it is known throughout much of North America.

The Golden Plover, *Pluvialis dominica dominica* (Muller), has, as well as *Gros yeux,* m., "big eyes", the less appropriate *Pigeon de mer,* "sea pigeon".

The Ivory-billed Woodpecker, *Campephilus principalis* (L.), of which Louisiana apparently harbors the only surviving individuals, becomes *le grande pique-bois,* "the big woodpecker" or also *poule de bois,* m., "wood hen".

The Towhee or Chewink, *Pipilo erythrophthalmus erythrophthalmus* (L.) became to the early French *Grassel,* m., or *Grasset,* m., "fatty" because, when shot for the table it was found in winter to be in such excellent condition. This bird is now completely protected.

The Eastern Brown Pelican, *Pelecanus occidentalis occidentalis,* L., official State bird of Louisiana, was termed *Grand gosier,* m., "great throat", not for its throat at all, but for the pouch suspended under the lower bill. An island off the coast of Plaquemines Parish, near Breton Isle in Louisiana, bears its name.

Unflattering, *Goilan charogne,* m., "Carrion Sea Gull", was used to describe the Laughing Gull, *Larus atricilla* L., because of its habit of picking up fish refuse discarded by commercial fishermen.

The characteristic habit of a startled American Bittern, *Botarus lentiginosus* Montagu, in pointing its bill skyward and "freezing" into immobility was well caught in the Louisiana-French name *Garde soleil,* m., an aphetic form of *Regarde soleil,* "look at the sun", and again *Vise-en-l'air,* "aim in the air."

THE BIRD OF FLOWERS

The Ruby-throated Hummingbird, *Archilochus colubris* (L.), has gained *Oiseau-mouche,* m., "fly bird" as one of three distinctive Louisiana-French names: Fly-bird either because of its minute size or because of the humming of its wings; *Colibri,* m., from a Carib Indian name, while *Osieau de fleurs,* m., "bird of flowers" is self explanatory.

Two widely different Swallows, the Barn Swallow, *Hirundo erythrogaster* Boddaert, and Purple Martin, *Progne subis subis* (L.), are confusedly called *Osieau de pluie,* m., "rain bird".

The Mockingbird, *Mimus polyglottos polyglottos* (L.) *Moqueur,* m., Louisiana's most famous singer resembles so closely in plumage appearance the Shrike or Butcher Bird that the latter, no songster, is called *Moqueur muet,* m., "dumb Mockingbird".

The Bufflehead, *Charitonetta albeola* (L.), one of Louisiana's sprightliest ducks is called, because of its small size, *Marionette,* f.

Modern bird lovers would never think of the Kingbird, *Tyrannus tyrannus* (L.), as a table dish. Memory of the old custom of eating it is preserved in its old Louisiana-French name, *Gros grasset,* m., "big fatty". *Grasset* is also applied to most Flycatchers and Warblers. *Corneille fouetteur,* "crow beater", is about as good a name as any ever given the Kingbird in any language.

Collier, m., "necklace", for the black band across its breast, is the name for the Wilson Plover, *Pagolla wilsonia wilsonia* (Ord).

The Greater Yellowlegs, *Totanus melanoleucus* (Gmelin) and Lesser Yellowlegs, *T. flavipes* (Gmel.) are *Patte jaune,* m., "yellow foot" or *Clou-clou,* m., or *Clouk-clouk.* Both of these latter names were given as imitative of the cry of the species just as *Cleek-cleek,* m., and *Cli-clique,* m., were similarly bestowed upon the Sparrow Hawk because of its voice.

BIRDS OF THE WATER

Zinzin, m., the Baldpate or American Wigeon, *Mareca americana* (Gmel.), is believed to have arisen as a Louisiana-French adaptation of some African Bantu word meaning "fly", brought by the slaves long ago to Louisiana territory.

The Ruddy Duck, *Erismatura jamaicensis* (Wilson), is known commonly by both the Acadians and English along the Louisiana coast as *Goddam* or *Goddem,* m., derived from the too familiar English and applied, it is believed, because of the extreme difficulty one encounters in plucking this close plumaged bird.

The Screech Owl, *Otus asio floridanus* (Ridgeway), whose difficultly describable calls have through long years of long nights curdled much blood, became picturesquely "the cat that hoots", *Chat-huant,* m.

The Spotted Sandpiper, *Actitis macularia* (L.), diminutive and graceful shore bird of wide range became the "gentleman of the shore", *Chevalier de batture,* m.

Cap-Cap, m., is the common little Blue Heron, *Florida caerulea caerulea* (L.), imitating the bird's hollow croak.

Jacksnipe becomes *Bécassine,* f., "snipe" or *Cache-Cache,* m., "hide and seek" because of its habit of remaining still when disturbed.

The Canvasback Duck, *Dafila acuta tzitzihoa* (Vieillot), because of some fancied resemblance of its head to the head of a horse became *Canard cheval,* m., "horse duck", while the Wood Duck, perching in the trees where it nests in trunk cavities is *Canard branchu,* m.

Benari, m., for the Carolina Wren is apparently intended to imitate its song.

The Black-necked Stilt, *Himantopus mexicanus* (Muller), won a wide variety of curious names, *Chien,* m., "dog", because of its repetitive *Cleek-cleek-cleek* on its nesting grounds; *Bécassine gros-tête,* f., "big headed snipe" is Louisiana-French for the Solitary Sandpiper, *Tringa solitaria solitaria* Wilson.

Mysterious in its appearance, its habits and in the dusk hours which it chooses for its journeyings, the Nighthawk, *Chordeiles minor chapmani* Coues, is often called by a combination Indian-French name, *Manguer maringouins,* "mosquito eater", from the French *manguer,* "eater" and *maringouins,* derived from the South American Tupi and Guarani *marigoui* or *maringouin,* "mosquito". Read found this term first used by the Jesuits in Mexico and West Indies as early as 1655 and by the French of Canada as early as 1632. The other French term for mosquito, *"moustique"* has in certain parishes a differential meaning, since it is a name applied only to the "small house mosquito" or to a "small black gnat". *Crapaud volant,* m., "Flying toad" was conferred upon the Nighthawk because of its wide, curious mouth.

DO YOU KNOW MORE NAMES?

The writer should much appreciate any further information regarding dialectic names applied to Louisiana wildlife, particularly colloquial names for insects, fishes, birds, and mammals. Any data received will be transmitted to interested philologists.

Thus from this violent melting pot of the once vast, vaguely mysterious, almost limitless, Louisiana territory, crucible of seven languages, meeting place of primitive hunter, trader, adventurer, priest and soldier of fortune, there emerged a language peculiarly striking because the contributing peoples lived dangerously in the presence of wild nature. Gaining from bayou, lake and forest

[Turn to Page 37]

KISATCHIE NATIONAL FOREST AND REFORESTATION

by
Maude Gallman Brown

The forest assets of Louisiana are one of four states valued in excess of one billion dollars, and the most important of these forest products is long leaf pine. However, the same situation has prevailed in Louisiana as in other states in that the commercial supply of timber is taken from privately owned holdings, that are not generally reforested after being cut over. Traveling north from Alexandria, Louisiana, you may drive for miles without seeing a house. Hundreds of acres of cut over pine greets the eye in any direction. Presently, however, you will come to a sign hung on what appears to be the burned stump of a pine tree. The sign reads "You are traveling through Kisatchie National Forest".

Kisatchie National Forest is located in north Louisiana and comprises 500,000 acres of cut over land. It is the only national forest in the state, and was purchased by the government for reforestation as it is stump land that would not naturally re-seed itself. This soil is a natural producer of slash pine and long leaf pine, however, in reforesting slash pine is being eliminated due to the superior commercial value of long leaf pine.

For the purpose of carrying on reforestation of Kisatchie National Forest, the Stuart Nursery was established near Alexandria, Louisiana, in 1933. The nursery was named in honor of the late Chief Forester R. Y. Stuart, and contains eighty acres. Work at the nursery is under the supervision of Mr. A D. Read, who received his Master of Forestry degree from Yale University in 1906, and has been active in forestry work since that time. Mr. Read stated this section of the country was chosen for nursery purposes due to the exceptionally long growing season. A similar nursery—the Ashe—was established in Mississippi in 1935. There are five other smaller nurseries throughout the United States.

FEBRUARY IS PLANTING TIME AT THE STUART NURSERY

In February each year 14,000 pounds of long leaf pine seed are planted on forty acres at the Stuart Nursery with an estimated return of 25,000,000 young plants. The other forty acres of the nursery are planted in a cover crop of velvet beans rotating each year. A seed drill is used in planting and the seeds are sown in rows about four feet wide and two feet apart. At a glance a field of pine seedlings resembles oats or a heavy growth of grass. Of course, the similarity disappears upon closer inspection, as even in the earliest stages they bear the long green needles of the full grown tree.

■ Plantation of young pine trees at four years of age.

Harvesting of pine seed for planting is the first task of the nursery. Pine cones contain the seed, however, they open and spill their seed before falling from the trees. This makes it necessary to climb the trees and pick unopened cones. A man can gather from ten to twenty bushels of pine cones daily, and receives thirty cents per bushel for them. The cones are placed in curing sheds to dry. There are six curing sheds at the Stuart Nursery with a total capacity of 42,000 bushels. The sheds are of frame construction with corrugated tin roofs and have shutters on all sides that can be opened to aid drying. Shelves line the walls of the structures with an aisle down the center, however, when the shelves have been filled with cones the aisle is then filled too.

In November removal of the cones from the curing sheds to the kiln is begun and continues through January. A dollie carries nine trays of cones, and the kiln will accommodate five dollies at a time. Each charge is left in the kiln from eight to ten hours to open up the cone and loose the seed.

From the kiln the cones are tossed into a shoot where they pass into a "cone-shaker" or extractor. This machine shakes the seed from the opened cones. The seed fall into prepared pans and the empty cones are dumped into the incinerator. Each charge of the kiln yields about one-hundred pounds of seed.

SEED PLACED IN COLD STORAGE TO AWAIT PLANTING

The seed have long wings, and it is necessary to run them through a "De-Winger", which removes most of the wings. Removal of the wings prevents flying when planting. From the "De-Winger" the seed are passed through a separator, which cleans out the chaff and light worthless seed. Following this a test is made to determine the percentage of germination in order to know how many seed to sow. The seed are then ready to be placed in cold storage to await planting time. They are put in large metal containers and set in the cold storage vault, which usually hangs around 32° and automatically defrosts itself every twenty-four hours.

This work having been finished, everything is ready for planting in February. The nursery keeps enough seed on hand to take care of a season's planting in the event nature should have a crop failure. At this time they have 18,000 pounds of seed in cold storage.

During their life in the nursery the seedlings require no cultivation except weeding, which is done every thirty days. They do require, however, a generous amount of water and for this purpose overhead oscillating irrigation is used. The pipes are fifty feet apart and each throws a stream of water twenty-five feet as it rotates. During the summer the young plants are sprinkled twice each week except when the temperature reaches 96°, at which times they are watered alternating nights. It requires five hours to make a sprinkle, and this is done at night to avoid scalding. Only forty acres of the nursery is equipped with irrigation consequently each season the irrigation system is transferred to the forty acres planted in pines.

Aside from weeding and sprinkling the young pines are sprayed three or four times each year for brown spot.

OVER 25,000 ACRES REFORESTED IN ONE SEASON

At the age of ten months the seedlings are ready to be transplanted. First a mechanical lifter passes down the rows

■ **Upper left, Long Leaf pine cones in the racks of a curing shed before seed have been extracted; Upper right, A skid load of pine cones on the way from curing shed to the kiln where drying process will be completed; Bottom, Exterior view of curing sheds with part of ventilators open.**

A field of long leaf pine seedlings with Kisatchie National Forest in the background.

their daily fare and welfare, they bestowed in turn upon the elements of cutting beneath the roots to a depth of ten inches. Men then follow the machine lifting the plants out by hand. About seventy-five WPA workers are employed on this project the year 'round to carry on the work.

The young trees are transplanted to the stump lands of Kisatchie National Forest, which would not otherwise re-seed itself. They are planted about six feet apart or the equivalent of 1200 seedlings per acre. However, since there are usually a few scattered trees in any area it is estimated that one season's planting at the Stuart Nursery will reforest 25,000 acres. Once reforestation of the stump lands has been completed, the forests will be managed in such way as to insure natural reproduction.

When the seedlings have been transplanted the acreage at the nursery is covered by two-hundred tons of rice straw. This is allowed to decompose before the cover crop of velvet beans is planted. The crops are rotated each year, first sowing pines then velvet beans.

At the time of transplanting seedlings range from six to eight inches in height, and look like a handful of pine needles. However, in four years time they will attain a height of fifteen to twenty feet. All along the highway what was until recently bare hills and denuded valleys is rapidly showing promise of the future long leaf pine forest of which the state can be justly proud.

Kisatchie National Forest has fourteen fire lookout towers, and fires are generally hit and extinguished before they cover more than ten to a hundred acres. However, they do sometimes get out under optimum fire conditions and burn five hundred to one thousand acres. Fires occuring in the plantations of young trees are sometimes so severe that replanting is necessary. Fire fighters are usually obtained from C. C. C. Camps scattered over the forest—from twenty to eighty men—depending on the size of the fire. Mr. Read expressed confidence, however, that forest fires would be overcome altogether eventually.

KISATCHIE IS SCENE OF MUCH MILITARY ACTIVITY

During the summer of 1940 Kisatchie was the scene of military training for thousands of National Guardsmen pouring into Louisiana from other states. Kisatchie was ideally suited to the purpose due to its close proximity to Camp Beauregard. Then, too, aside from the adaptability of the 500,000 acres in Kisatchie many more thousands of acres of privately owned stump land were available for use. These factors, plus the naturally rolling terrain made Kisatchie a desirable practise field for future soldiers. The guardsmen were careful to avoid plantations of young trees, and little, if any, damage was done to the forest by their maneuvers.

Kisatchie is again seeing much activity. One hundred and fifty thousand men have been assigned to Camp Beauregard. The barracks at Beauregard are totally inadequate to accommodate that many men. So barracks are being constructed in different parts of Kisatchie National Forest to take care of these soldiers.

Private owners of forests and stump lands having seen the progress made in Kisatchie National Forest, have been encouraged to seek enlightenment and assistance in reforesting and preserving their own acres. Such information is always gladly given, and as the soldiers at Camp Beauregard complete their year's training and return to their home states, they must carry with them a deeper appreciation for all forests after spending a year beneath the sighing long leaf pines of Kisatchie National Forest.

Be sure you have a fishing license before you go out to fish. Remember—Conservation Agents are on the job to enforce the laws and they are not permitted to sell them—licenses may be purchased from the sheriff's office of any parish.

The Department of Conservation maintains a film loan service and will be glad to lend films to any organization, club or school in the state. Write the Division of Education of the Department of Conservation at New Orleans for full details.

LOUISIANA'S PICTURESQUE WILDLIFE NAMES

[Continued from Page 34]

their daily fare and welfare, they bestowed in turn upon the elements of their intimate world a descriptive language, whose terms are probably more varied and more vivid than any to be found in any other tongue in the whole earth. Education, easy travel, newspapers, wider reading, the radio, all now operate steadily to destroy this picturesque speech. Let this speech continue to preserve in the history of Louisiana its place of deep interest for the lover of nature and for the lover of language!

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Most hawks do more good than harm. If you cannot identify the different species of hawks—leave them alone.

HILLS OF SURPRISE

by
Caroline Dormon

The Kisatchie Wold—don't you love the sound of it? Isn't there something deliciously wild in the music of it? The Kisatchie Wold is a great range of hills beginning at Cane River, in Natchitoches parish, and extending across Sabine, on a little way into East Texas. It also laps over into Vernon parish for quite a distance, and a corner of Rapides. The crest of the water-shed lies across the lower end of Natchitoches parish, and in this area may be found the most rugged and beautiful landscape in the state.

It is just a step from the old, old civilization along Cane River into these almost untenanted hills. From Natchitoches, Derry, or Chopin, it is only about an hour's drive to the heart of the Wold. From Derry or Chopin, one is plunged almost immediately into "the untamed;" up and up, over the rocks and sand—the best that even the toughest little car can do to make it. Presently one finds himself "on top of the world," with a surprising sweep of vision—ringed 'round on every side by great hills, blue, blue in the distance. Often there can be counted at one time smoke from four or five saw-mills, mills which are fed by the once vast forests of this area.

From Natchitoches the ascent is more gradual; one hill after another, each a little higher than the last, until a delightful elevation is reached.

Only a few years ago these hills were all clothed in magnificent forests, the finest type of which the South can boast, long-leaf pine. Often for a stretch of twenty miles there was scarcely a break in the ranks of these straight, clean columns. Thre was no undergrowth, and between the soft-brown trunks of the pines, equally soft-colored deer could be glimpsed, grazing on the sweet grasses. Now the pines are almost gone, and with them, of course, went the deer. But on most of these areas the pines can be brought back—and the deer.

MANY SPRINGS CAN BE FOUND IN THESE HILLS

The "breaks" before mentioned were in themselves delightful. In these hills are many wonderful springs, sometimes gushing out of solid rock. These feed hundreds of clear, sparkling streams So, descending a long hill, one is sure to come to a stream of some sort. It may be only

Right—A picturesque bayou in Kisatchie Wold.

Below—Sandstone in Kisatchie Hills.

a tiny one, with a "head" filled with dogwood, wild azalea, sweet bay, and giant ferns. Or it may be a small creek, racing through a mere gash in the hills, tall pines guarding its passage; tumbling over rocks, and spreading out shallowly over white sand, as if calling to little feet to come and wade. Sometimes it is a big beautiful bayou, with alternate rapids and deep, shadowy pools. If it tumbles over a rocky ledge, it falls with a roar and a churning of white foam. If one lingers at a still pool, he will presently hear the rich "plunk" of a striking bass.

Along these larger streams are charming groups of hardwood trees; emerald beech woods, splendid oaks, and great magnolias leaning to the stream.

The deer used to find abundant winter pasture in these swamps; switch-cane, and other delicacies. The shy woodcock, too, loved these moist, open woods; and in all the area, wild turkeys were plentiful. Who does not believe that, with protection, these can be brought back? But they must have forests in which to range, in which to feed and hide.

A few pine forests remain, primeval as when soft-footed Indian braves hunted in their shade. They have been marred somewhat by man-made fires but are splendid still. Here is peace. Here the pine-woods sparrow trills his tiny note at dawn, and arches the grasses over his hidden nest. Exquisite wild flowers open in the dappled sunshine and shadow. The quail thunders up at the approach of the intruder. At night there is only the murmur of the little stream close by, and perhaps the solemn trump of a great horned owl to accent the whisper of the pines.

■ **Cascades on Sandy Creek, Kisatchie Wold, in Natchitoches Parish. (Mixed hardwoods along banks)**

Biology of The Powder-Post Beetles, *Lyctus Planicollis* Leconte and *Lyctus Parallelopipedus* (Melsh.)

Part II *

by
M. B. Christian

In Part I of this paper, which appeared in the winter issue of this magazine, the life history, damage caused by two species of *Lyctus* powder-post beetles, and their control were discussed. Characteristics which differentiate immature and adult stages of these beetles were also outlined.

In Part II, further biological data on these beetles will follow, as well as a discussion of their predatory and parasitic insect enemies.

SEASONAL ACTIVITIES

In newly seasoned woods of high starch content, two generations of this species may appear annually under outside temperatures. Under favorable conditions, only about three months were required for the complete life cycle. The shortest period observed was 76 days and occurred from May to July in pecan sapwood, which was exceedingly high in starch content. Generation studies have shown that the life cycle may extend over a much longer period (one record 11 months) when the wood host contains a small quantity of starch.

Life cycles of only three months have been observed within three wood hosts, namely, ash, oak, and pecan. These observations were of special interest and importance because of the previous general opinion, both in America and abroad, and that all species of *Lyctus* beetles required at least nine months to develop from the egg to the adult stage (2), (7), (17).

The general spring emergence or flight period of *L. parallelopipedus* from lumber in Louisiana yards began about April 15th and continued through June, during 1938 to 1940. A second generation appeared in late summer and the beetles continued to emerge until cold weather arrived in late fall.

LYCTUS PLANICOLLIS

Apparently a full year is required for beetles of this species to complete their life cycle when breeding in wood exposed to outside temperatures. Under favorable conditions a few beetles matured and emerged in four or five months, but general emergence required a much longer period. Adult beetles have been found on mill yards only in the spring and early summer.

The majority of adults of *L. planicollis* emerged from about March 15th to May 15th in Louisiana, or about one month earlier than beetles of the smaller species, *L. parallelopipedus.*

In laboratory experiments where wood samples were held at specific moisture contents and subjected to attack by newly emerged beetles, larval attack occurred in all samples ranging from 6 to 32% in moisture content. Noticeable attack was not found in wood above or below the above range, but beetles were observed ovipositing in wood which contained 65% moisture, and no doubt these eggs would have hatched and the larvae developed if the wood sample had been allowed to air dry in the manner which normally occurs under mill yard conditions. (Refer to Table I). Large numbers of adult beetles (*L. parallelopipedus*) have been found on lumber which had been converted from the green logs for a period of only two weeks. In several instances, adults of *L. parallelopipedus* have been found emerging from lumber on the mill yard which was only four or five months from the green log.

TABLE I

MOISTURE CONTENT OF TIMBER IN RELATION TO ATTACK BY *LYCTUS PARALLELOPIPEDUS* (MELSH.) AND *L. PLANICOLLIS* LECONTE

Wood Species	Starch Content	Moisture Content (Constant)	Caged with	Intensity of Attack
Pecan	high	0	20 para.	free
Pecan	high	12	20 para.	destroyed
Red Oak	Med.	14	20 para.	almost destroyed
Red Oak	Med.	20	20 para.	Med.
Pecan	Med.	23	20 para.	Med.-
Pecan	Med.	26	20 para.	light
Red Oak	Med.	40	20 para.	free
Red Oak	Med.	52	20 para.	free
Red Oak	Med.	70	20 para.	free
Pecan	high	0	20 plan.	free
Pecan	high	4	20 plan.	free
Pecan	high	6	20 plan.	trace
Pecan	high	8	20 plan.	light
Pecan	high	13	20 plan.	destroyed
Pecan	high	16	20 plan.	destroyed
Pecan	high	20	20 plan.	destroyed
Pecan	high	26	20 plan.	heavy
Pecan	high	32	20 plan.	heavy
Pecan	high	65	20 plan.	None

These observations emphasize the necessity of treating the lumber while green in order to prevent the initial infestation. These beetles were unable to estabish themselves in wood below 6% in moisture content; however, this preventive method has little or no practical value since it is impossible to hold the moisture content down to this point in the Gulf States unless some moisture repellent material is impregnated within the kiln dried wood.

It was not realized at the beginning of this investigation that all sapwood of the three species of American timber most liable to attack (ash, hickory, and oak) did not contain sufficient starch for the development of larvae of *Lyctus* beetles, but this fact has been conclusively demonstrated during the course of these experiments. Intensive observations indicate that the adult beetles were able to detect timber containing starch, and if available laid their eggs only in such wood.

The relative starch content can be readily determined by applying a water solution of iodine and potassium iodide[2] to the freshly cut surfaces of the wood.

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* Part I appeared in the Winter, 1940-41, issue of the Louisiana Conservation Review.

[2] Dissolve ½ oz. potassium iodide in 200 cc water and add ¼ oz. iodine crystals. When all the material is in a solution add water up to 1 qt. (6).

Where starch is present the addition of iodine will result in a bluish or bluish black color. In many instances larval infestations occurred only in thin lavers throughout a board. The application of the iodine solution revealed that the infested sections contained the greater amount of starch.

In May 1938, two generation cages were set up using parent adults of *L. parallelopipedus*. In one of these, large numbers of young adults emerged after a period of only three months; in the other cage adults did not appear until after a period of 11 months. Starch tests were made on the two pieces of ash sapwood; the former was exceedingly high in starch; the latter gave only a light bluish color on the addition of the iodine, indicating the presence of only a small amount of starch. Fewer beetles have emerged from the latter piece of wood.

On the basis of the above observations and published reports of other workers who have dealt with this phase of the *Lyctus* problem (11), (12), (13), an investigation was conducted during the summer of 1939 to determine the percentage of logs that was low or absent in starch content and consequently not particularly liable to attack by *Lyctus* beetles. These studies were made in the case of freshly cut logs before they were unloaded in the mill yard. Areas of about 2 inches in width were cut with a sharp ax from the bark area to the heartwood, to which iodine solution was applied with a small hand sprayer. The relative starch content of each log was classified according to the intensity of the color reaction on the sprayed wood. These classifications were as follows: no color reaction, starch absent; faint trace of blue, starch low; blue color plainly visible, starch medium; dark bluish black, starch high.

The results from these studies indicate that, with the possible exception of oak, the majority of trees contain sufficient starch for the development of larvae of *Lyctus*. The results from these starch tests on logs are shown in Table 2.

TABLE 2

RELATIVE STARCH CONTENT OF FRESHLY CUT LOGS AS INDICATED IN TESTS CONDUCTED FROM JUNE 1 TO JUNE 15, 1939

SPECIES	NUMBER OF LOGS				
	STARCH CONTENT				LOGS TESTED
	Absent	Low	Medium	High	
Ash	3	9	33	55	100
Red Oak	5	39	40	16	100
White Oak	10	45	40	5	100
Red Gum*	18	18	43	21	100
Pecan	1	2	3	27	33

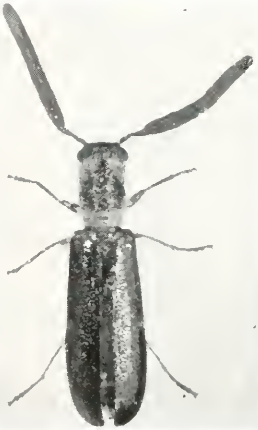
* Red gum is seldom attacked by *Lyctus* beetles undoubtedly due to the small pores which limit oviposition.

PREDATORY AND PARASITIC INSECT ENEMIES

Insect enemies of the *Lyctus* beetle were very common in all infested lumber inspected on mill yards and they undoubtedly play an important role in limiting the abundance of these pests (17). Six species were taken from infested wood during this study; two predacious clerids—*Tarsostenus univittatus* (Rossi)[3] and *Monophylla terminata* (Say), (Figs. 9 and 10); four parasitic wasps—*Monolexis lycti* (Cress.), (Fig. 11) *Sclerodermus macrogaster* Ashmead, *Heterospilus* n. sp. (Fig. 12) and *Ecphylus* n. sp. The most common in the above group were *T. univittatus* and *Monolexis lycti*; however, the *Heterospilus* species was often found in large numbers emerging from wood infested with *L. parallelopipedus*.

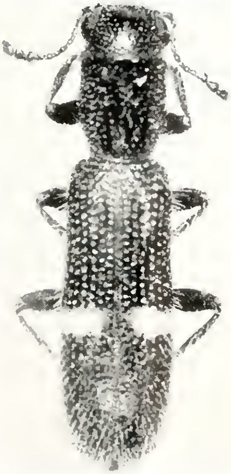
Tarsostenus univittatus—A description of the predatory habits of this beetle with illustrations of the egg and the larval stages were reported by St. George (14). The eggs were laid in the vessels of wood infested by *Lyctus* beetles and after hatching, the larvae locate the tunnels of *Lyctus* larvae and feed on the larvae. The adult beetles crawl very rapidly, an advantage which enables them to overtake the *Lyctus* beetles, where they overpower and devour them leaving only the wing covers of the victim as evidence of the struggle.

Only scant data have been obtained on the period required for a life cycle of this predator. Under cage conditions inside a constant temperature chamber of 80° F., a few beetles have completed a life cycle in about five months. Under outside climatic conditions, this beetle probably requires a full year to complete its life cycle.



■ Fig. 10. ***Monophylla terminata*** **(Say)—greatly enlarged.**

(By J. H. Roberts)



■ Fig. 9. ***Tarsostenus univitattus*** **(Rossi) greatly enlarged.**

(By G. F. Lake)

LOUISIANA STATE UNIVERSITY LIBRARY

In order to determine the effectiveness of this predator in preventing infestation by *Lyctus* beetles, four cages were set up in May, 1939. Newlv seasoned red oak sapwood high in starch and free of beetle infestation was employed in each cage. Cage No. 1 contained 10 newly emerged *L. parallelopipedus* adults and 5 newly emerged *T. univittatus* adults. Cage No. 2 contained 10 newly emerged *L. planicollis* adults and 5 of the clerid adults. The other two cages were controls which contained the same number of *Lyctus* beetles but no clerids. The wood from the four cages was split up four months later and carefully examined. No indication of infestation occurred in the cages which contained clerid beetles. Attack was severe in the controls. These rsults indicate that the predacious clerid adults when present in sufficient numbers can effectively prevent attack by

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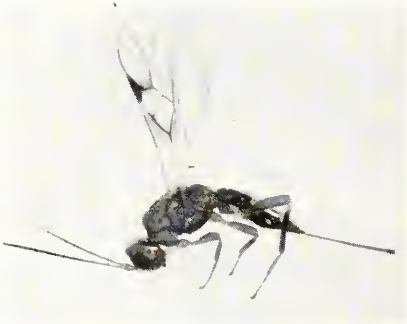
[3] All identifications by C. F. W. Muesebeck and his assistants in the Bureau of Entomology and Plant Quarantine, Washington, D. C.



■ Fig. 11. *Monolexis lycti* **(Cress.) — greatly enlarged.**

(*By J. H. Roberts*)

Two Common *Lyctus* **Parasites**

Lyctus beetles. However, the clerids are evidently dependent on *Lyctus* stages for food necessary for reproduction, consequently an abundant population would probably be impossible without a previous abundant population of stages of *Lyctus*.

Under outside conditions the clerid adults do not appear in the spring as early as some of the *L. planicollis* adults, a condition which undoubtedly reduces the effectiveness of this natural enemy against *L. planicollis*.

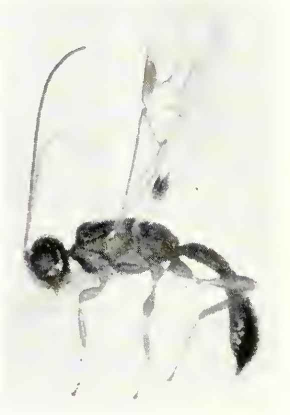
DETAILED NOTES ON THE MOST COMMON *LYCTUS* PARASITE, *MONOLEXIS LYCTI* (CRESS.)

In order to observe the habits of this parasite several adult female wasps were collected from wood infested by *Lyctus* and caged in a glass jar with small pieces of ash wood which contained *Lyctus planicollis* larvae. There were no emergence holes in the wood nor any other external indications of *Lyctus* attack. The samples had been infested by *Lyctus planicollis* under cage conditions.

The wasps crawled about over the wood for sometime before inserting their long ovipositors. Approximately twenty minutes were required for oviposition. Later some of the wood was split open and a *Lyctus* larva was found directly below the surface at each point where the parasite's ovipositor had penetrated the wood.

After a period of 24 hours all the adult wasps were removed and the cage was placed in a constant tempertature chamber set at 80° F. Thirty-one wasps emerged from the wood after a period of slightly over one month. Some of the adult wasps appeared after a period of only 25 days.

Apparently the wasps lay but one egg on each *Lyctus* larva and after hatching the parasite larva crawls over the body of its victim and feeds through the epidermis.



■ Fig. 12. *Heterospilus* **n. sp.— greatly enlarged.**

(*By J. H. Roberts*)

During the above experiment a parasitized *Lyctus* larva was taken from the wood and placed in a 5 cc. glass vial for detailed observation. The larval parasite was approximately 2/3 grown and the *Lyctus* larva was in the prepupal stage. Two days later the *Lyctus* larva died, apparently due to the feeding of the parasite. The parasite continued to feed on the dead larva for three more days, then began to spin a cocoon upon the dead victim. Two days were spent in an effort to weave a cocoon, but this was broken up by rolling about inside the glass vial and five days later pupation occurred. The pupal stage extended over a period of 9 days and then it transformed to a normal adult wasp. The next day the wasp was crawling about on the sides of the glass vial.

The exit holes of parasites are much smaller than those made by *Lyctus* beetles and are usually much clearer cut and more circular in shape.

In most of the wood infested under yard conditions by *L. parallelopipedus* the emergence holes of parasites greatly outnumbered those made by *Lyctus* beetles.

The reason for the more abundant paratization in infestations of the smaller species of *Lyctus* has not been determined; however, this is probably due to shorter life cycle of *parallelopipedus*, which enables the parasite to build up a high population.

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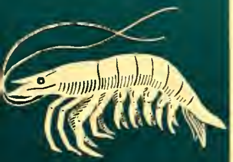

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